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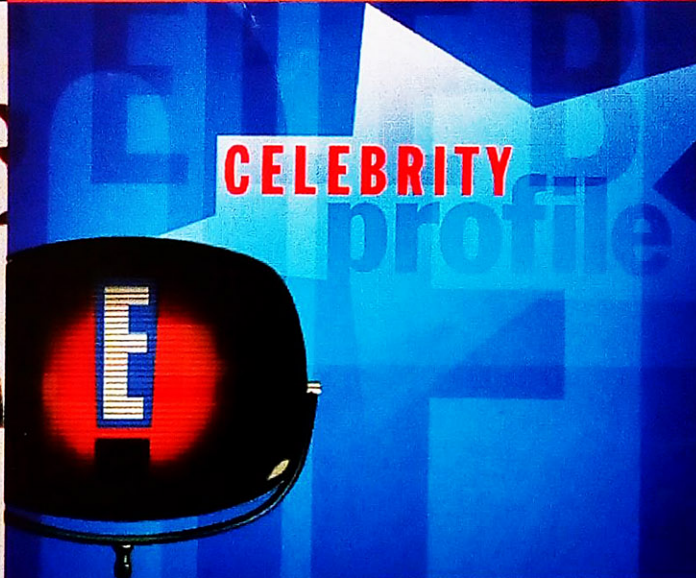
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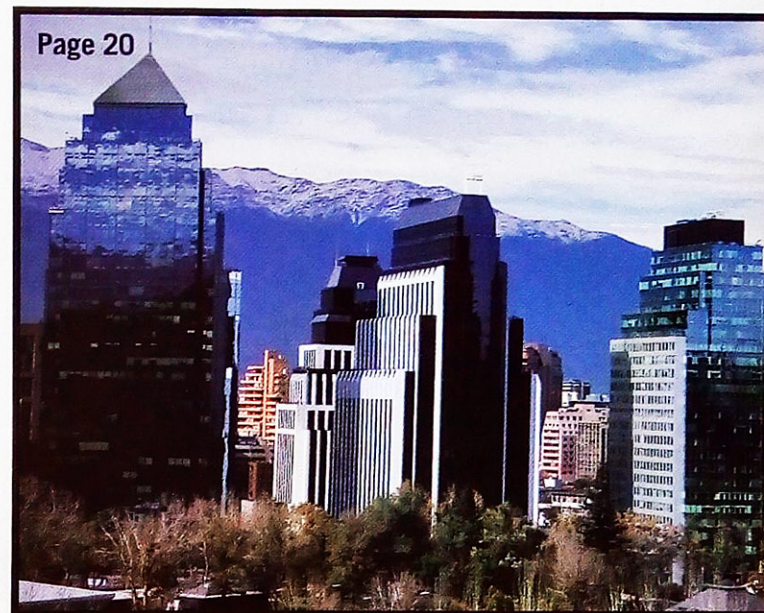
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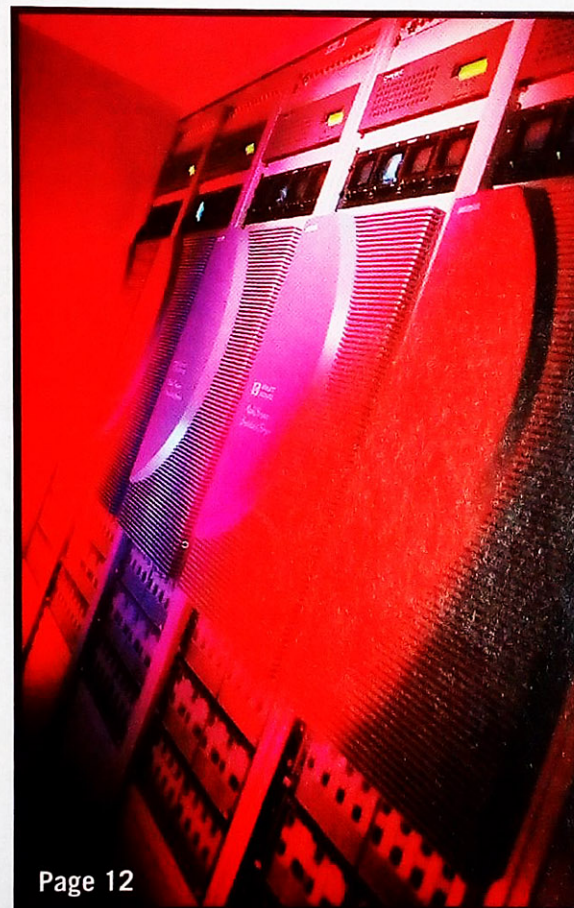
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ON THE COVER: Pay-per-view champion of the 1990s Mike Tyson, on Showtime Event Television

WORLD WATCH

Nervous Splendor

BY JANET STILSON

There's a book that I've wanted to read for years called *A Nervous Splendor*. It's about Vienna, Austria during the last *fin de siècle* — just before the fall of the Hapsburg dynasty and the rise of Adolf Hitler. It was the time of Sigmund Freud, the painter Gustav Klimt and composer Gustav Mahler. And although they apparently didn't have teenage mass murderers then, it was a time of strange suicides and a collective despair.

While the book paints a much broader canvas of society and thought than my own personal area of fascination — media — I was reminded of it when I attended the MIP-TV program market last fall. And I expect that it will surface again this month at the NATPE market in New Orleans.

In the TV business, I sense a nervousness that has to do with questions about the future. Will there be a need, some are asking, for markets like NATPE, when e-commerce for program syndication kicks into higher gear? I've concluded there is no substitute for face-to-face meetings with



The industry really hasn't awakened to the reality that the economics of creating programming are undergoing a gigantic change.

people when you're dealing with creativity. And I don't think the Internet will ever supplant such markets.

But it's not so easy to toss off another contributing factor to all the nervousness, which was best articulated to me by David Tenzer of the talent house Creative Artists Agency. He believes that the industry really hasn't awakened to the reality that the underlying economics of creating programming are undergoing a gigantic change.

We've all been wowed by the multi-year, mega-million-dollar studio deals signed by writers of hit TV shows. But I'm not so sure those pacts are going to be that common in the future. Seat-of-the-pants, micro-budgeted projects that pull in extraordinary box-office grosses — among them *The Blair Witch Project* — are beacons of light to Tenzer. He believes *Blair Witch* could indicate an emerging trend, as more and more companies making both TV and film productions seek out creative ways to widen the margin between costs and revenue, as budget restrictions shrink-wrap the possibilities.

One interesting factor to me in all of this is the Internet, particularly in the wake of the announcement that Amer-

ica Online Inc. and Time Warner Inc. plan to merge. Even setting that aside, I know a woman in Hong Kong who works for a company that's producing a growing amount of TV shows with an eye toward increasing traffic on the company's Web site, which has a big e-commerce component. I know a guy in New York who is working with an Internet-content provider that apparently has all the money it needs to make a 50-part documentary series. The Internet is the inspiration for the TV-styled series, not TV itself.

Needless to say, marketing on the Internet was also one reason why *The Blair Witch Project* succeeded. Who knows what other distribution windows and marketing tools will emerge even one year down the pike? That's just one of the nerve-wracking puzzles that's likely to register with NATPE attendees as they gaze at all the TV hoopla and splendor.

Janet Stilson

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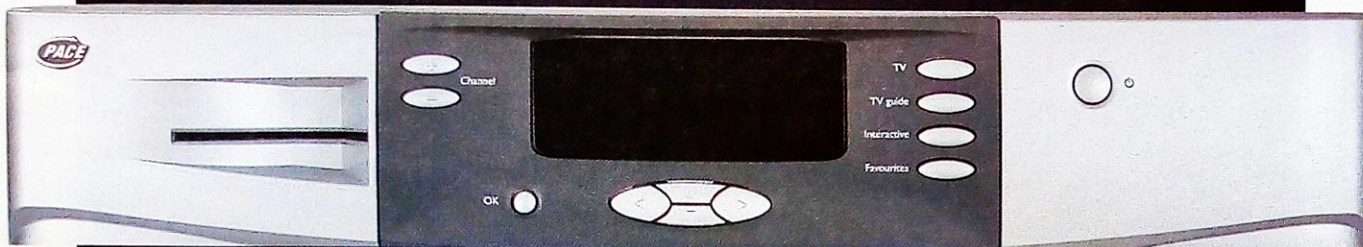
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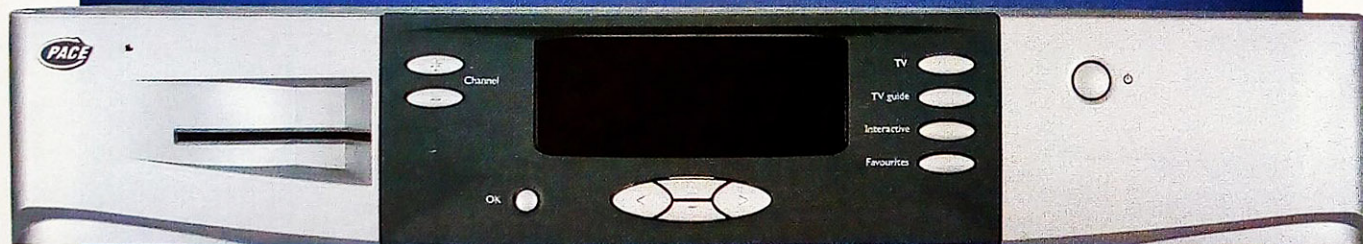
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BLIPS ON THE SCREEN

A Latino Soccer War

BUENOS AIRES

BY JOSHUA GOODMAN

Soccer in Latin America is much more than just a pastime, it's an obsession. The passion is so intense, that a closely contested World Cup qualifying match between Honduras and El Salvador in 1969 was enough to provoke a brutal, two-week border conflict, known as the "Soccer War."

The region's next soccer war, however, is more likely to be decided by ratings and remote controls rather than bullets and bloodshed.

Next month, a new panregional sports network is set to bow and join industry titans Fox Sports Américas and ESPN International, as well as a number of well-armed local players. Dubbed the Panamerica Sports Network



BAEZ

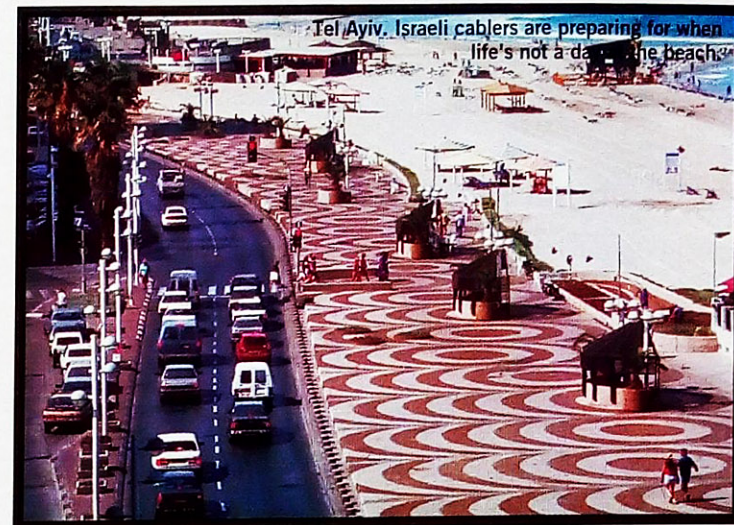
(PSN), the newcomer is the brainchild of Dallas-based private-investment fund Hicks, Muse, Tate & Furst Inc. (HMT&F), a team of investors who are no underdogs in the region. Mueller Sports, its management affiliate for the region for sports-related ventures, is no rookie, either. The firm

is headed by former Reebok International Ltd. CEO Roberto Mueller.

According to HMT&F partner and PSN project manager Cesar Baez, PSN already controls television rights to a number of panregional soccer tournaments. These include Copa Libertadores and Copa Mercosur, as well certain exclusive TV rights to some of the much-coveted World Cup qualifying matches. PSN has also been awarded rights to regular-season coverage of the French, Portuguese and Italian leagues. In addition, HMT&F is an important investor in two sports-rights and media-production companies: Argentina's Torneos y Competencias S.A. (TyC) and Brazil's Traffic.

Though few of PSN's competitors doubt the appeal the newcomer's programming will hold for

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Tel Aviv. Israeli cablers are preparing for when life's not a day at the beach.

Israel's Lost 'Heaven'

TEL AVIV

BY SASHA LEVY

To understand the dramatic shift within the Israeli cable-television business these days, you need only speak with Shani Kogan. "The cable companies had 10 years of heaven; now it's over," asserts the telecommunications analyst at Nessuah Zannex Securities. "Now there are new rules and a framework for competition, so they will have to play the game."

The nirvana Israel's cable operators enjoyed for so long as the chosen ones of the multichannel-television industry involved a de facto monopoly to provide pay TV services. They easily achieved and retained a 70 percent penetration rate and annual revenues estimated at \$US500 million — a figure the operators do not deny.

"They did nothing to improve themselves in the last few years, because their situation was already so fabulous," asserts Kogan. But recently, a convergence of forces — political, technological and market-driven — have forced the operators back down to earth and into unaccustomed action. But even without all the outside forces, the lure of the Internet and telephony businesses was enough to make the operators embrace change on their own free will.

First, a bit of background: The operators' fall from grace began two years back, when Israel's Communications Minister at that

time, Limor Livnat, decided the country's three cable companies had sinned: They had failed to connect households in sparsely populated areas of the country.

Livnat's chosen form of punishment was to issue a controversial license for the provision of direct-to-home TV to a startup company, YES DBS Satellite Services, which is due to launch this May.

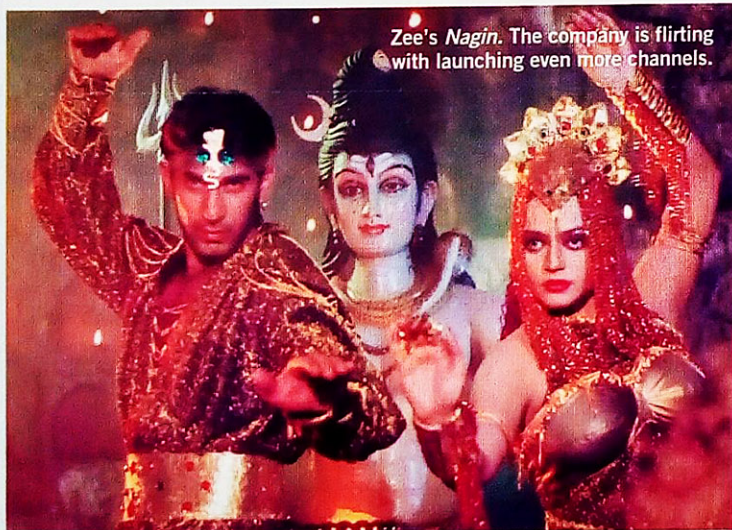
The prospect of such unforeseen competition jolted the cable operators into an unusual spate of activity. "All the cable operators are upgrading their infrastructure," reports Daniel Jacoby, president of Matav Cable Systems Media Ltd. "We're improving customer service — a few months ago we launched around-the-clock [customer] service. And we're buying more and better content."

In fact, to the delight of the major American program distributors, the operators swiftly outmaneuvered YES by going on a programming-buying spree around the middle of last year. *Ha'aretz*, Israel's most respected daily newspaper, hung a price tag of \$US25 million on their collective purchases, a figure neither confirmed nor denied by the companies.

The operators also asked the government as far back as two years ago for permission to offer their subscribers tiered packages — something they had refused to do back in the good old days. As it turned out, the request was denied.

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Jousting Giants in India



Zee's Nagin. The company is flirting with launching even more channels.

NEW DELHI

BY RASHME SEHGAL

There is an old Indian saying that when two elephants fight, the grass underneath them gets trampled. A similar joust occurred in Indian television during Star TV and Zee Telefilms Ltd.'s tumultuous partnership. When

they finally parted ways last year, the country's private broadcasters breathed a collective sigh of relief.

The separation of the two was amicable enough, with Zee paying Star for its stakes in their joint holdings that included channel owner Asia Today Ltd., programming supplier Patco and multiple system operator Sititcable.

But chances are the ground could become even more mashed over the coming months, as the heavyweights flex their muscles and build their individual portfolios.

Zee, free of a non-compete clause that governed its ties to Star, aims to launch three new English-language channels over the next couple of months. They'll fall under the "Alpha" umbrella brand that's already spawned a trio of local-language networks — Alpha Marathi, Alpha Bengali and Alpha Punjabi — that appear to be performing well according to ratings data from Indian National Television Audiences Measurement. With more regional channels set to bow by midyear, Zee will extend its lead as India's largest private TV programmer. And it leaves little question as to Zee chairman Subhash Chandra's status as the country's top media mogul.

"We have freed Star TV to compete with us and I know they'll

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Advertising

HotSpots

Longo's Media Logic

Using an Integrated Approach to Bring Pay TV Into the Mix

BY KRISTI NELSON

From his office in a sleek skyscraper complex in São Paulo, Walter Longo tussles the knotty problem of how to expand the small world of pay TV advertising in Brazil.

After all, he knows both sides of that coin. Today, Longo is executive vice president of advertising agency NewComm Bates, and president of its direct-marketing and event-planning unit, One Four One Brasil Ltd., which he set up a year ago. In the realm of pay TV, he is equally distinguished, having once helmed TVA, Brazil's second largest cable company and a unit of publishing giant Grupo Abril.

Known for his exuberant personality, Longo has been widely feted over the years for his marketing prowess, though his maverick ideas don't always fly with everyone.

In some ways, Bates' One Four One, which boasts 42 offices in 32 countries, is a maverick itself. Its *raison d'être* is to fulfill clients' needs that are not being met by traditional advertising. To complete what it dubs its "beyond advertising" mandate, the company

uses an integrated-marketing approach using mixed-media advertising packages that include vehicles such as direct mail, the Internet, and, of course, pay television.

To be sure, pay TV has a long way to go in Brazil, given that it attracts less than 1 percent of all ad spending, according to industry estimates.

At the heart of Longo's "big idea" is the notion that commercials should be created specifically for pay TV, or, better still, as part of an integrated package that can include any combination of media.

A One Four One advertiser that opted for the integrated option involving cable was the local unit of Motorola Inc. The company used the approach to tout Opto, its new e-mail-retrieval/paging service. It first ran preview ads in major news and business magazines to announce Opto's pending launch last March. It then unleashed a three-minute technical splash about the service exclusively on Organizações Globo's general-entertainment cable channel GNT. The third element was a live sketch performed in cinemas that featured actors talking about the

service before the beginning of films. Promotional flyers were distributed at the end of the movie. The final element was a sweepstakes announcement placed in magazines.

However, not everyone wants to swallow Longo's advertising recipe.

Andrea Afonso, media manager at Rio de Janeiro-based ad agency Fischer America, argues that the extra cost of producing a commercial specifically for cable is prohibitive.

Her general sentiment is echoed by others in the industry. "It's too much work for agencies to produce commercials [for pay TV]. An easier way of making money is to place the commercial on [broadcast network] Globo and the same commercial on pay TV," says one industry executive who asked not to be identified. "Agencies are also not researching pay TV's audience."

Longo responds to such criticism by summing up the advantages of pay TV, which in Brazil delivers an upscale demographic. The country's notoriously lopsided distribution of wealth means only the well off, a small minority, can even afford pay television.

"Pay TV's beauty is that it is capable of targeting," says Longo. And that means the ability to offer advertisers a well-defined, upscale consumer demo, plus names and mailing addresses that can be pulled from an operator's existing subscriber database. Multichannel-TV companies should plug these advantages as much as possible, he says.

He adds that with about 2.5 million pay TV subscribers in Brazil, most of which are concentrated in the "A" and "B" classes, advertisers might reach only 1 percent of the total TV audience. But seen from another point of view, they are getting to over 25 percent of Brazil's purchasing power.

Longo says operators and agen-

Continued on Page 10

RESEARCH

Measuring the Message

BY WILLIAM SPAIN

Half the money I spend on advertising is wasted; the trouble is, I don't know which half," once said John Wanamaker, a 19th Century Philadelphia department store magnate.

Too bad he didn't live long enough to meet Doug Hughes.

As vice president and American director for DDB Matrix, a new unit of Omnicom Group Inc.'s DDB Worldwide, Hughes is in charge of a new system that may provide some answers to one of advertising's oldest questions: Which mediums and messages are most effective in influencing purchasing decisions, and how can one tell?

"This has been an issue for a lot of our clients," says Hughes.

"They just don't know what is driving their business."

The attempt itself is nothing new. Various methods of quantifying the results of ad spending have fallen in and out of vogue over the years, but the devil has always been in the data. Without complete and timely delivery of hard information on when, where and how fast product flies off the shelves, companies and their agencies have had to rely largely on educated guesses — some more educated than others.



HUGHES

DDB Matrix uses mathematical models to track and predict the impact of a wide array of marketing tactics, including media spending, on a company's bottom line. That's been tried before but one big difference — and the reason the system shows so much promise — is the enormous expansion of client sales information in recent years.

"The biggest barrier has always been client data and, to some degree, computational resources. Now, all this data is streaming in. Their internal operations have gotten very efficient and the speed at which they can get data — all data — has been revolutionized," Hughes says. "Given the right data, we can be very precise about what marketing spending has done for business results. While we primarily work with hard data like sales figures or Web hits ... one of the requirements for this to work is that you have to account of for all the major impacts on a business."

Those impacts include not only media spending, but also distribution, pricing, display, competitive advertising, economic factors such as interest rates and unemployment, holidays — even the weather.

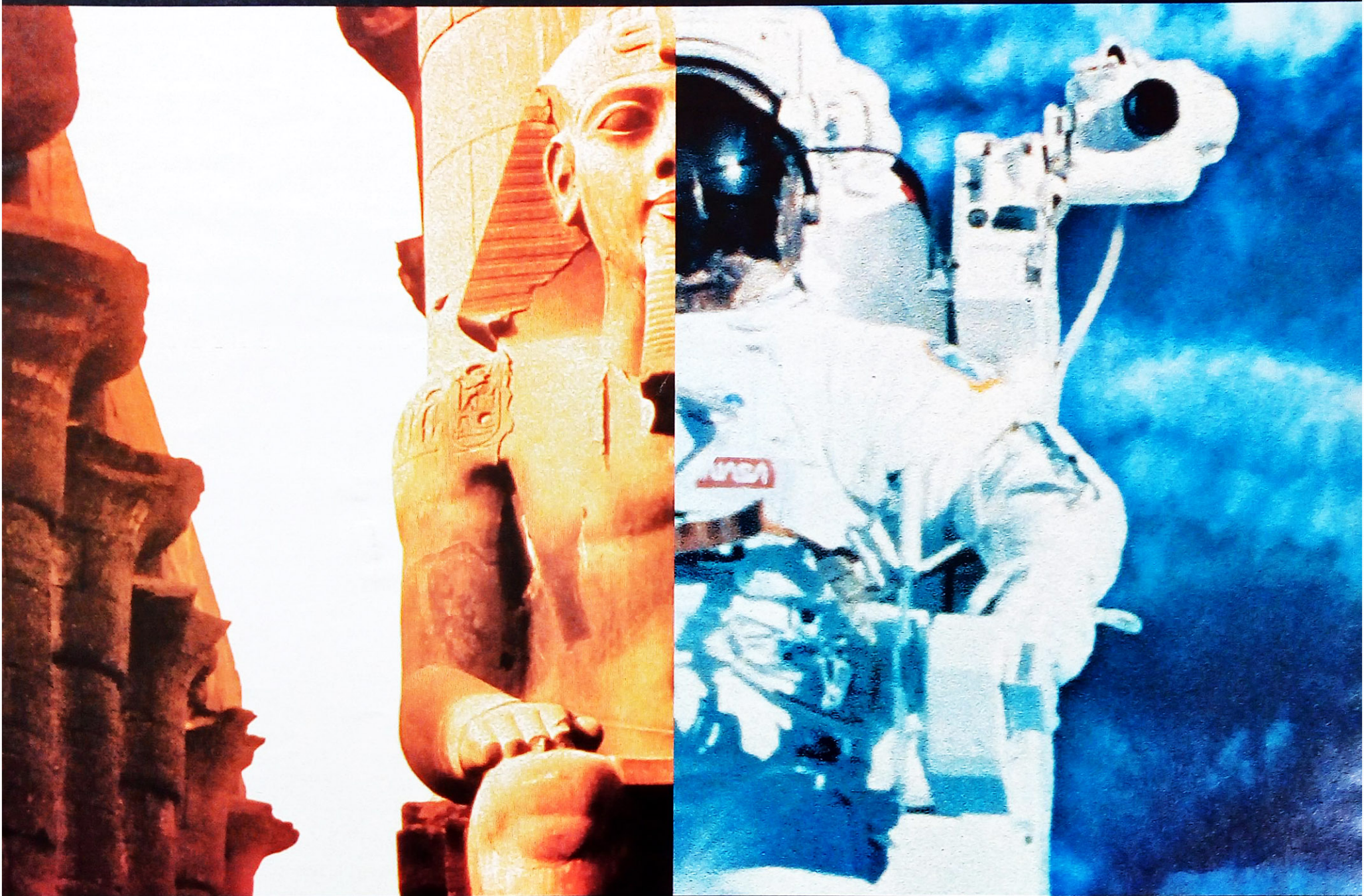
However, when everything is factored in, and if DDB Matrix can get access to comprehensive sales data, Hughes claims that "our forecasts can be amazingly accurate." For instance, with the right data, "the forecast of weekly sales of consumer packaged

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Fact or Fiction in Asia?

FEW WOULD ARGUE that the audience-research situation for satellite-delivered networks in the Pacific Rim is getting better. The number of markets with Peoplemeter data is on the rise, with pay TV data on the Philippines, New Zealand and Hong Kong joining the fold shortly, according to officials at ACNielsen.

What is frustrating, however, is that right now, only four markets in the vast region are measured by

Peoplemeters. Statistical results in those countries differ greatly from data generated by other surveys that rely on viewer recall. That suggests that the recall-survey data in markets where Peoplemeter numbers aren't available also may be quite misleading. At least that's the opinion of executives such as Julie Petersen, director of research at Hong Kong-based network group Star TV. The following charts are Star's analyses of how one recall survey, PAX, compares with Peoplemeter data in Taiwan.

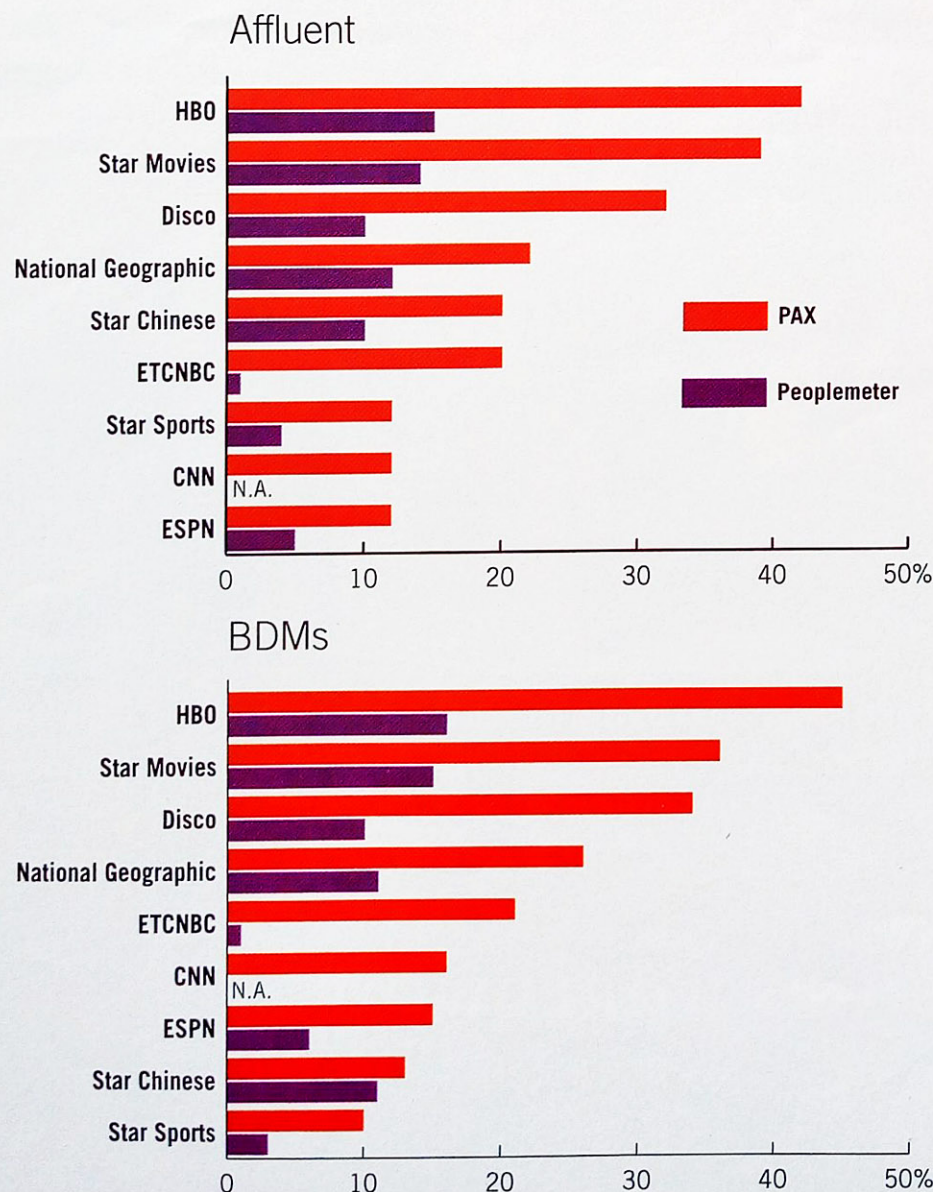


Star executives say ACNielsen officials have explained that the disparity between the two studies occurs because PAX takes into account out-of-home viewing. But Star contends it has other survey data that proves their channels also have strong out-of-home viewership.

A few further words of explanation: The PAX fieldwork in Taipei was conducted from May to the beginning of August. The Peoplemeter data was taken from nine random days in May and June. "BDMs" refers to business-decision makers, including individuals supervising a department at a company with at least 10 employees.

Taipei – Viewing Yesterday

Individuals 25 to 64 years old



SOURCE: AMI PAX, ACNielsen

NOTE: CNN is not part of the Peoplemeter study because the network's audience is not represented to a statistically reliable degree, according to CNN officials.

Measuring,

Continued from Page 8
goods can be within plus-or-minus one percent over a year. "

If it works as well as hoped — and if the inflow of specific sales information continues to expand, the system could eventually have wide implications for media all around the globe.

"This sounds very ambitious and I wish them well," says Jerry Dominus, vice president of network sales and marketing for the New York-based Cabletelevision Advertising Bureau trade group. "It is modeling based on history, and that's great."

However, he adds, when it comes to actually forecasting the sales effect of a specific media buy, "I'd be interested to learn to how they can factor in the impact of competitive activity before it has even happened."

While DDB Matrix primarily operates in the United States and Britain (the team is split equally between Chicago and London), the firm has been in touch with potential clients as far afield as Argentina and Greece.

Among the companies currently using DDB Matrix are Tyson Foods Inc., telecommunications provider U S West Inc., consumer-products giant Unilever N.V. and McDonald's Corp.

Because the system is custom designed for each client, and since the results are proprietary, DDB is understandably cagey about releasing specific case studies. However, Hughes does say, "we had one client — a retailer — who was

particularly interested in their mix of promotional vs. brand messages, and the effectiveness of each in driving overall sales. Using their historical-sales data, we were able to recommend a change in their mix of promotional to brand messages, and in their use of cable and broadcast." He declines to say whether broadcast or cable won, but "they did make changes in their ratio of cable to broadcast and, by our estimates, increased sales by 5 percent to 7 percent."

With at least one media company losing business from the client as a result of the study, ad salespeople are going to have to sit up and take notice if DDB Matrix ever comes into wide use. The trouble, of course, is that there is very little they can do about it. While Hughes and his team would be happy to sell their services to any media outlet willing to pay for the analytical time, it would have a very limited application as an ad-sales tool. Marketers that have found success through the use of a particular medium aren't likely to allow that fact to be bruited about where the competition might learn of it.

"We have talked to some media outlets about [using Matrix], but one stumbling block is that this work is all custom. What works for one client, with one strategy, with one medium, may not work for another," says Hughes. "There might be an opportunity [to demonstrate] that a particular client is under-utilizing a particular vehicle, but it would be risky," since the results might well prove the opposite. ■

Longo,

Continued from Page 8
cies make the mistake of sticking to the 2.5 million subscriber figure. While this may represent the number of individual subscriptions, pay TV has an estimated 10 million viewers based on an average of four viewers per household.

And due to Brazil's uneven income distribution, these 10 million viewers are responsible for 30 percent to 40 percent of what is consumed nationwide, he adds.

Certainly, Longo is something of a veteran of Brazil's pay TV and advertising sector. Now in his late 40s, he was once president and regional director for Latin America at the ad agency Young and Rubicam Inc. before his tenure at TVA from 1991 to 1996.

Following TVA, he founded a consulting firm, UNIMARK, specializing in marketing, technology and entertainment services.

UNIMARK was acquired by NewComm Bates in November 1998. Longo also served as president of two trade groups, the Brazilian Subscription Television Association and the Brazilian Association of Suppliers of Multi-services Networks in Telecommunications.

That background gives him the credentials to talk knowledgeably about the benefits of pay TV to advertisers, who are least showing they are prepared to spend more, despite Brazil's economic downturn and currency devaluation a year ago.

In the first nine months of 1999, pay TV ad revenue in Brazil totaled \$US25.8 million, according to one estimate. That's a 15.4 percent increase compared with the same period in 1998. Meanwhile, total ad revenue in Brazil was down 0.5 percent in the first nine months of 1999 to \$US3.1 billion. ■

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Wrestling With the VOD Questions

Video-on-demand has come a long way in the last few years. But despite much improved technology and economies of scale, some skepticism remains.

VIDEO-ON-DEMAND IS SUDDENLY A HOT TOPIC AGAIN.

Almost three years ago, when Time Warner Inc. pulled the plug on its much-hyped Full Service Network (FSN) system in Orlando, Fla., the picture looked very different. At the time, in May 1997, many observers questioned the wisdom of cable operators investing heavily in the complex and expensive headend equipment needed to supply viewers with everything from the instantaneous provision of programming — video-on-demand (VOD) — to the speedy delivery of a mozzarella-heavy pizza.

Even Time Warner chairman Gerald Levin, in a widely published interview, admitted at the time that FSN was “off the mark,” and that “he who makes a living from a crystal ball must learn to eat ground glass.” The costs of the experiment were reportedly in the \$US100 million range.

To give credit to Time Warner, and other similar VOD tests and trials that have taken place over the past few years, many were deliberately designed to put leading-edge technology through its paces. The technology worked just fine, but the business models all too frequently failed to match expectations.

Despite enormous optimism about VOD's brightening picture, there are some who question whether all the ground glass has been swept away. Among those concerned about getting cut by a sliver or two is Hollywood. Some movie-studio executives express major reservations about how VOD is developing. At the same time, the decreased cost of technology and the rollout of digital systems that enable two-way communications are making operators and technology companies much more optimistic.

“VOD is the killer application,” says Leigh Wood, chief operating officer of Britain's largest multiple system operator (MSO) NTL Inc., as she talks about the company's rollout of digital services over the next year. In her opinion, VOD is the application “that differentiates us wildly from the competition.” By competition, she's referring not only to direct-to-home platform British Sky Broadcasting plc, but digital-terrestrial TV as well.

Get it right and the prize, according to estimates from Forrester Re-

search Inc., is a glittering share of the \$US8 billion-a-year video-rental market. Forrester predicts that by 2005, cable's VOD efforts will grab around \$US3.1 billion of that market. Direct-to-home satellite “buys” will only add to that value.

Investment bank Merrill Lynch & Co., for its part, estimates cable alone could reap up to \$US6 billion a year in total VOD revenue by 2009, accounting for about 47 percent of the home-video market.

Further understanding of VOD's potential comes from the U.S. programmer Showtime Event Television (SET). It reports that in the first six months of 1999, the U.S. generated pay-per-view (PPV) revenues of \$US267 million from “events” alone, up 114 percent from the same period in 1998. Boxing and wrestling made up 98 percent of the total.

Helen Britton, the Los Angeles-based vice president of programming for yet-to-launch VOD service DemandVideo Corp., notes that there's a “huge” difference in buy rates when operators move from PPV to near video-on-demand (NVOD), which is a middle-ground between PPV and the instantaneous delivery of programming afforded by VOD. But how much buy rates will increase when systems move to video-on-demand from near-video-on-demand is less clear. “While market tests and research indicate that consumers want VOD, nobody knows the exact rates for VOD over NVOD,” she says.

Britton explains that large programming distributors pose a number of questions about the future of VOD. Needless to say, most queries have to do with revenue. “Right now, there are very few VOD households, and it costs [the studios] probably \$US25,000 to \$US50,000 just to do one of these [VOD-distribution] deals. There's costs like staff time, lawyer time and tape transfer,” she says. While the studios have participated in several VOD tests, “it has cost them a lot of money, and so far they haven't gotten anything in return. Now they need evidence of [subscriber levels], effective technology and a business strategy that indicates that the VOD companies will produce revenues back to the studios.”

BY CHRIS FORRESTER

"Is there a need for VOD? What does a consumer get from VOD that they don't get from NVOD?" Jack Waterman, president of worldwide pay TV for Paramount Pictures Television Group, asks when speaking about NVOD versus VOD. Paramount, through parent Viacom Inc. has ties to home-video giant Blockbuster Inc., a firm that has reason to consider VOD a potentially huge threat to the bottom line. It's small wonder that Blockbuster recently teamed up with digital-recorder company TiVo Inc. to launch a video-on-demand service.

Some might counter Waterman's questions by noting that VOD provides the opportunity to exploit library product in addition to new movie titles. But "it costs a lot to convert to the VOD environment," Waterman says, speaking not about his own studio's costs, but about the cost to operators.

Perhaps of even greater concern to Waterman is how cable systems will package VOD services with other interactive offerings made possible by two-way digital technology. "We're not looking for other businesses to launch on the back of VOD and our movies," Waterman says. "A lot of companies are looking to do e-commerce or repeat viewing of [regular TV programming]." He contends that operators need to build firewalls to prevent those businesses from cannibalizing the VOD revenue stream for studio product. "I'm looking to sell movies in the most effective way we can," he adds.

Technology companies contend that programmer concerns about the economics of VOD have been resolved. For example, Maynard, Mass.-based SeaChange International Inc. says it has more than met operators' objectives of lower-cost servers that don't require an army of technicians.

Yvette Gordon, vice president of interactive technologies for SeaChange, says today's VOD is very different from the Time Warner FSN trial in Orlando, particularly when it comes to cost. "If you looked at the FSN or Omaha, [Neb.], trial, they were far too expensive. There were two parts to that expense: first the capital costs, and second the operational costs of the trials, in other words the number of people needed to keep the trials up and running."

Gordon contends that costs have declined so much that a business plan can really work. VOD "is no longer rocket science, needing an army of technicians," she says. "It is a straightforward, plug-and-play system. It's a huge difference."

SeaChange says this reduction in costs and overall flexibility now provide a very real option for modest-sized systems to climb aboard the VOD train. "We calculate the breaking-point system as being 1,000 streams, which is 10,000 subscribers. Below that, figure the breakeven into profitability might be longer than our two-years-or-so ideal. But above 10,000 subscribers, we are very comfortable about a two- to three-year payback," adds Gordon.

SeaChange file-servers have been selected for a VOD trial conducted by British MSO Telewest Communications plc. SeaChange rival nCUBE Corp. is also involved with the Telewest trial

[Corp.] equipment," says Ariza. She adds that because GI equipment is in some 70 percent of U.S. cable homes, it was vital to come up with server solutions for GI customers.

Also looking to cash in on VOD is Menlo Park, Calif.-based Diva Systems Inc., a soup-to-nuts VOD provider offering everything from equipment to program content. Diva normally expects cable operators to pay a flat amount per subscriber to cover hardware and installation costs. Then, once VOD revenues hit a pre-agreed level, they are split between Diva and the cable operator.

Once installed, Diva offers viewers a large roster of VOD pro-

gramming, including movies, children's shows and specialty programming, along with the ability to pause, fast-forward and rewind programming.

it also has agreements with channels such as Home Box Office, ESPN, Discovery Communications Inc., National Geographic, PBS and Playboy Entertainment Group.

Diva says the deals it is striking with operators involve a revenue split of 25 percent for top-10 movies, 35 percent for other movie releases, 20 percent for library product, 12 percent to 15 percent for adult material and 5 percent to 6 percent for specialty programming and kids shows.

The company also says its research indicates operators can expect typical buy rates of 3.5 to four purchases per subscriber, per month. But SeaChange's Gordon

predicts European buy rates won't hit the four-a-month level that U.S. VOD consumers are expected to reach. She suggests that as VOD moves away from the mainstream programming that has dominated PPV in the past, such as adult fare, movies and sports — and moves into genres such as children's shows, it could bump up the buy rates.

Clearly, Diva is about to test the predictions in both the U.S. and Europe. Last September, it struck a major agreement with MSO MediaOne Group Inc. for a number of markets in the United States.

Additionally, Diva confirmed a relationship with U.K.-based set-top maker Pace Micro Technology plc in May 1999 that allows Pace to integrate Diva's solutions for British MSOs, Telewest and Cable & Wireless Communications. NTL, which is in the process of absorbing Cable & Wireless' systems, has also contracted with Diva for a trial in Woking, a large suburb southwest of London.

Diva is working closely with Yes Television, a regional VOD operator in the United Kingdom. It has a VOD trial in Cardiff, South Wales that uses Scientific-Atlanta Inc. boxes. (For a closer look at the VOD projects in Britain, please see the VOD story in the "Broadband International" section, page 25)

Yes Television isn't limiting itself to the U.K. It plans to roll out in Thailand, with local partner Broadcasting Network Thailand, passing about 800,000 homes. The technical trial is currently taking place. A similar deal has been struck with South Korean Internet-service Provider ThruNet.

One of the most advanced VOD projects occurring in Asia now is in Hong Kong, where telco Cable & Wireless HKT has provided genuine VOD since March 1998. It operates its asymmetrical-digital-subscriber line-dependent VOD service through subsidiary company IMS. That unit's spokeswoman, Anna Ngai, says the service began with just 200 hours of material and has grown to well over 1,000 hours of programming.

IMS is getting added strength from a news-on-demand deal with Reuters plc and a recent agreement for multimedia services with programming platform Star TV, which is backed by News Corp. It has also linked up with Microsoft Corp., which will use the system as a main test-bed for software that merges television and PC technology. Microsoft chairman Bill Gates, in a local Hong Kong report stated that the market's ADSL system is "the best place in the world" to try true video-on-demand over the Internet.

Subscribers to the service, which uses the brand name iTV, pay about \$US35 a month, a figure said to be some 50 percent of what it actually costs IMS to provide the service.

However, local industry insiders are highly critical of iTV. Its business plan originally promised 250,000 subscribers by March

"We're not looking for other businesses to launch on the back of VOD and our movies."

— Jack Waterman, president, worldwide pay TV, Paramount Pictures Television Group

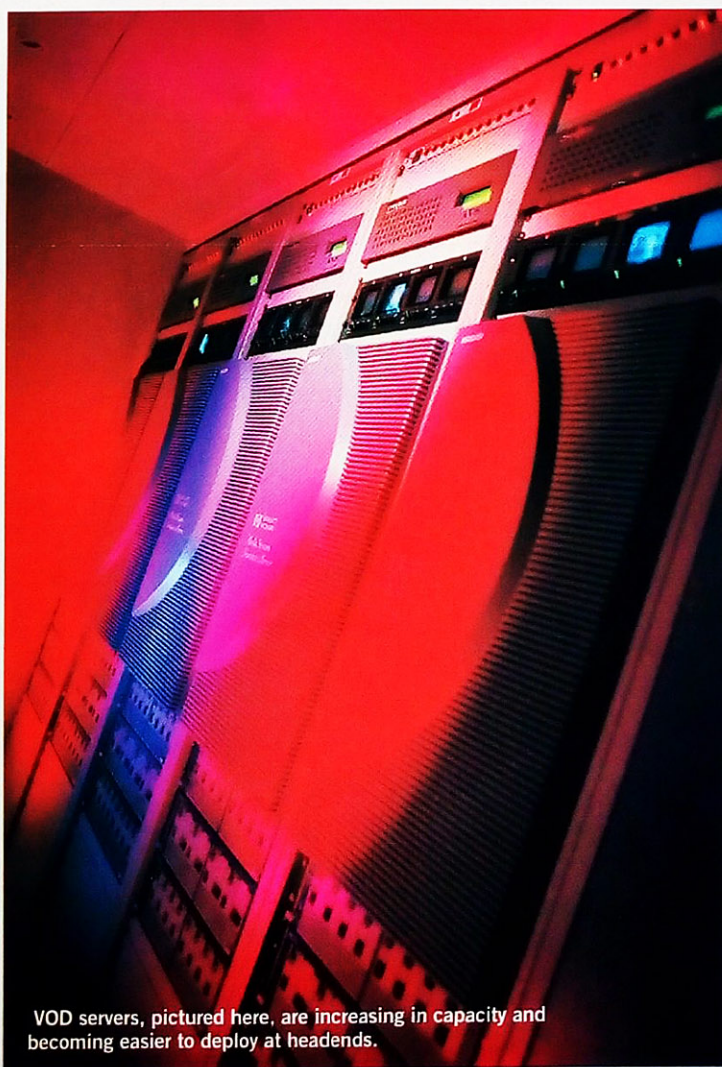
with one of its MediaCUBE scalable video servers initially supplying 825 simultaneous streams for 20,000 households split across two franchises. SeaChange has also been picked for China's Guangdong GDCATV system. Guangdong province is one of China's wealthiest regions, and the system there plans to use SeaChange hardware primarily for educational services. GDCATV is providing "a large library of educational programming" to serve some 400,000 households by the end of 2000, according to SeaChange. The systems integrator is Guangzhou-based Global Net Broadband Industry, which has also developed specialized set-top boxes for the scheme.

Clearly, companies like SeaChange and nCUBE are gearing up for big business. Another rival is Concurrent Computer Corp., which was recently selected for a Time Warner trial in Tampa, Fla., involving 877,000 households. The test is "three times the size of the [SeaChange] Austin trial. We were competing head-to-head with [SeaChange], waiting to see who would be selected, so we consider Tampa a big win," brags Andrea Ariza, Concurrent's vice president of corporate communications.

Concurrent stock doubled last November after the company acquired competitor Vivid Technology in a stock-and-cash deal valued at some \$US20 million. "Vivid was attractive because even though it was a small company, it had an excellent video server, and in addition they have an excellent relationship and technology solution for General Instrument

programming, including movies, children's shows and specialty programming, along with the ability to pause, fast-forward and rewind programming.

Diva has struck content deals with almost every major Hollywood studio, including Warner Bros., Walt Disney Co., Sony Pictures Entertainment, Universal Studios Inc., Twentieth Century Fox Film Corp., Dreamworks SKG, MGM International TV Distribution Inc., New Line Cinema Inc. and Polygram Inc. And



VOD servers, pictured here, are increasing in capacity and becoming easier to deploy at headends.

1999. The actual numbers were closer to 80,000 at that time.

Allen Ma, head of iTV, has rolled back his projected breakeven date by two years to 2003 and says that VOD movies, Karaoke sing-alongs and horse racing are not enough to drive the business plan forward. In his view, the killer app will be Microsoft's content input.

The picture is just as confused in Singapore. Magix, Singapore Telecom's brand name for its VOD service, was launched in November 1997 using ADSL technology at speeds up to 8 megabytes per second. It had signed up only 14,000 subs as of April 1999 — far fewer than Hong Kong's iTV. Yet observers

and Internet content, starting in the spring.

Graham Mills, British Telecom's director of visual and broadcast services, is closely involved with the trial. He predicts a healthy future for conventional movies as VOD programming, but also suggests spectacular growth possibilities thanks to Internet-protocol-based, Web-streamed content.

Mills reckons that once viewers

become accustomed to programming-on-demand, they will quickly expect increasing flexibility and sophistication in what is offered.

"I can easily see the Hong Kong community in London having all the Hong Kong channels and services available to them," Mills says. "The same would apply to Brits who want to hook into the Los Angeles area or elsewhere in the world. It will

mean TV is available anywhere, anytime."

Such rosy outlooks are tempered not only by the historic results of VOD so far, but also by those who are trying to troubleshoot the issues up ahead. "There's side issues like copyright protection," says Britton. "Also quality-of-picture issues, the rate for data transfer." Most Hollywood studios, for example, won't

allow VOD streams below 4 megabytes per second, according to Yes TV head of marketing Steve Garvey.

These are issues that VOD providers and programmers have talked about until they're blue in the face. But trying to avoid the shards of ground crystal that could puncture the VOD promise is likely to make the reality a lot more solid. ■



VOD "is no longer rocket science, needing an army of technicians. It is a straightforward plug-and-play system."

— Yvette Gordon, vice president of interactive technologies, SeaChange International Inc.

say Magix's technology is impressive. Singapore Telecom acknowledges mistakes were made along the initial learning curve, and now states that it is concentrating on sales and marketing.

Another telco heavily committed to VOD is British Telecommunications plc (BT). It is backing a major West London VOD trial using ADSL technology, and it has a buoyant view of its prospects. BT says it will upgrade 400 local telephone exchanges, covering about 6 million homes, to supply VOD and interactive

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New Realities for Reality TV

To glean the truth about reality TV, one need only look at the numbers.

BY PETER HAMILTON

THE ASSET VALUE OF REALITY-TV-BASED BUSINESSES has grown from a base of about \$US100 million in 1984 to approximately \$US18 billion this year, according to information gathered from a wide variety of industry sources. Those companies include not only TV channels, but distribution, production and marketing firms with strong interests in the sector.

In every market, the genre is benefiting from the launch of ever-more finely targeted reality channels on subscription-TV platforms, while reality programming is occupying more slots on terrestrial networks.

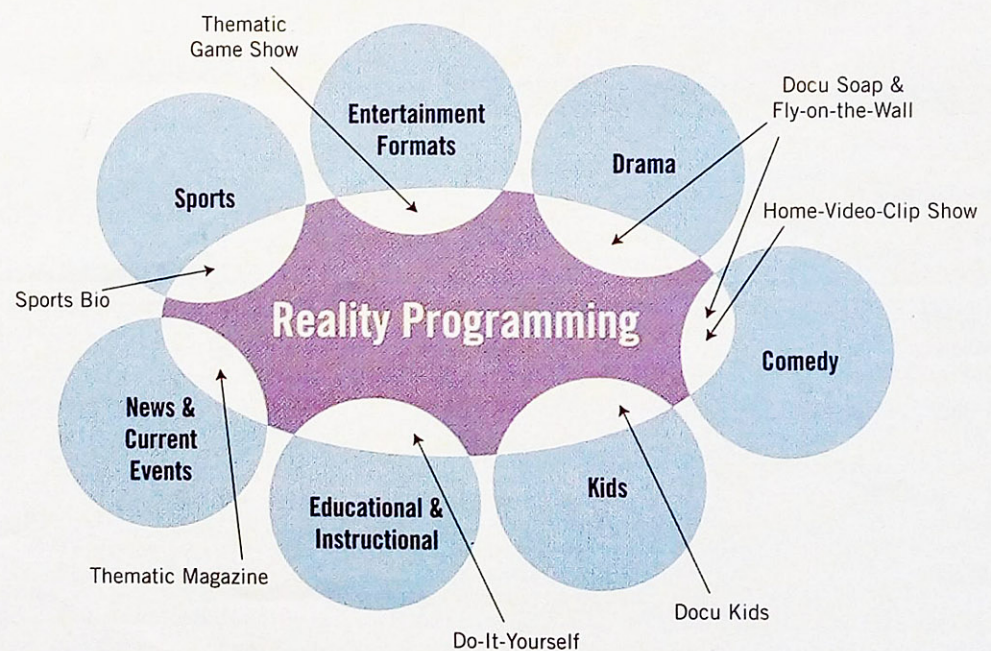
One year into what might be called the Digital Television Era, the reality niche is poised for another value shift. In order to repeat the results of the last 16 years, the sector must successfully exploit the links between the emotionally powerful television experience and the information-rich and highly responsive Internet universe.

Part of the challenge ahead for market leaders such as Discovery Communications Inc. and A&E Television Networks involves the need to retain their core TV audiences while adding interactive features to their products. What's more, they'll need to counteract new programming and related products from digital innovators from inside and outside the industry.

Programmers who are influential in the blue-chip sector, such as Japan's NHK, will need to respond to the growing market power of the British Broadcasting Corp. and Discovery, as the two deepen their relationship. They've already teamed up on channels and super-blue-chip programming, such as the *Walking With Dinosaurs* series.

Another large question mark hovers over established producers of human-interest documentary programs. It remains to be seen how they'll survive the growing concentration of production power in a handful of suppliers.

On the plus side for everyone is the vastness of the reality



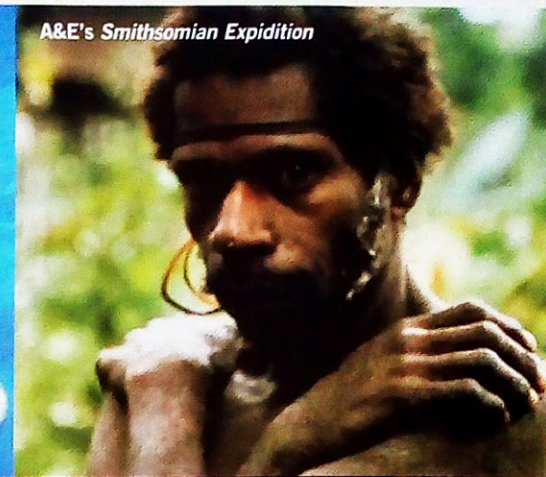
category. Traditional documentaries may have ruled the niche years ago. But as the chart above illustrates, reality-based programming today overlaps with every category of television and mass media. By exploring the areas where categories meld into each other, programming and production teams have created successful hybrid categories such as "docu-soaps."

The chart on pages 18 and 19 gives a detailed analysis of the types of shows currently commissioned and acquired by networks that schedule reality programs, and includes specifics on what they look for in terms of content, quality and pricing.

Both charts are an example of the kind of information analyzed in a Peter Hamilton Consultants 300-page report, *Reality 2000: Documentary Television in the Digital Era*. It will be released shortly via the Internet at www.realitytelevision.com and in print.

Multichannel
InternationalReality
TVNational Geographic's *Alligators*

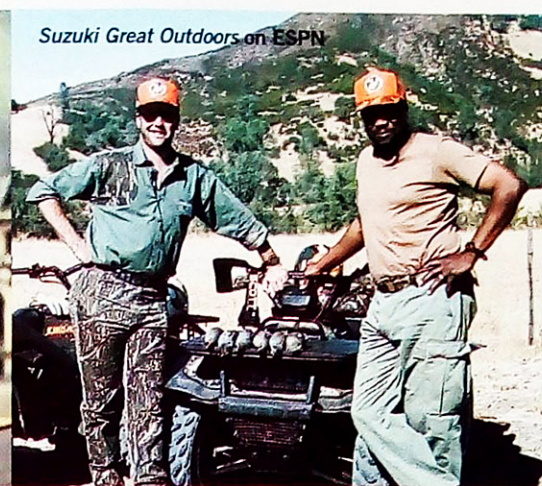
The Human Body, on TLC

A&E's *Smithsonian Expedition*

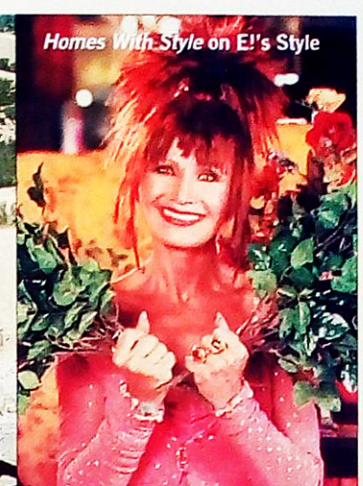
	NATURAL HISTORY	SCIENCE	PEOPLE & PLACES
BLUE CHIP	A definitive, intimate and deeply studied portrait over time, either of a species or of the occupants of an environment. <i>The Life of Birds</i> (David Attenborough & BBC Natural History Unit, PBS)	The authoritative and definitive reporting of scientific discoveries and processes. The genre includes paleontology, forensics and archaeology. <i>Walking with Dinosaurs</i> (Tim Haines & BBC Science Unit/Discovery, ProSieben, France 3 & TV Asahi)	A highly "authored" genre based on a definitive study of people and societies, and including anthropology as well as portraits of contemporary humans and events. <i>Disappearing World</i> (Granada, ITV), <i>4 Little Girls</i> (Spike Lee, HBO Documentaries)
BUDGET (PER HOUR)	\$US400,000 to \$US1.5 million-plus	\$US400,000 to \$US3 million-plus	\$US400,000 to \$US1 million-plus
SPECIALIZATION	Blue chip natural history is the last romantic television craft. A handful of auteurs are famous for their subject expertise, story-telling ability, technical skills and qualities as intrepid travelers.	A researcher's or director's genre, in which cutting-edge graphics and complex filming create outstanding sequences.	The genre is driven by the expertise to gain access to people and societies, and to tell powerful, long-form stories based on dramatic filmed sequences.
DEVELOPMENT AND PRE-PRODUCTION	For all genres, there are limited slots available in each market, and the best-funded networks share well-established, first-look agreements to support coproductions. Other success factors include unique access to stories, deep subject expertise and the ability to use cutting-edge computer graphics. Extensive field reconnaissance is usually required for natural history, people & places and adventure. History relies on comprehensive pre-production planning based on a researcher's deep knowledge of the archives. Blue chip production teams are technically skilled in 16mm and sometimes 35mm and IMAX. Underwater specialists use DVD.		
FIELD PRODUCTION	The production schedule for classic blue chip is two to three years, with more than 15 months spent in the field to capture compelling sequences of animal behavior over two breeding seasons.	Elaborate, dramatic reenactments may advance the story line, especially for topics that predate the film archive. Cutting-edge computer animation may give a decisive lift to the storytelling.	Classic anthropology requires extensive field time to understand and capture stories in remote and often daunting locations. Production schedules are comparable to natural history.
POST-PRODUCTION	In classic blue chip natural history and people & places, the editing process is highly "authored" and the story is "found" in the editing room. However, industry-wide budget pressures and improved editing technologies have combined to emphasize pre-edit planning versus "authorial" editing processes. In history, science and other genres, post-production tends to be driven by a detailed paper edit. Original music and clearances of performance rights add value to blue chip programming.		
HUMAN INTEREST STORIES ("B")	The category, across all genres, refers to compelling, human-interest stories conveying deep knowledge of a subject, and is largely made up of series and strands. The category is therefore more strongly formatted than the more individual programming found in blue chip. Topics tend to be significantly less highbrow than those of blue chip. The category may involve a popular or "cult" presenter or celebrities. Many popular specials are also classified in the human-interest category.		
	<i>In the Wild</i> (Tigress Productions, WNET-TV/Nature)	<i>Inside Area 51</i> (Termite Art Productions, Discovery Channel)	<i>Lonely Planet</i> (Pilot Productions, Channel 4, The Travel Channel)
BUDGET (PER HOUR)	\$US150,000 to \$600,000	\$US150,000 to \$US400,000	\$US150,000 to \$US400,000
SPECIALIZATION	Genre expertise may be less important than production expertise in specific formats such as the fly-on-the-wall documentary. Key success factors include solid television story-telling skills and the discipline to work successfully within tight budgets. However, some genres do require significant subject expertise, among them the man-against-animal sequences that typically propel story-driven, popular natural history programming, and the archive expertise necessary for history programming.		
DEVELOPMENT AND PRE-PRODUCTION	No matter what the genre, multi-episode (two to 13 or more) commissions are frequent in the human-interest category. Such arrangements both create scale for producers, while serving the desire of networks to concentrate on a handful of preferred program suppliers. International coproductions are more difficult to arrange than for blue chip. The category requires significant research and unique access to special stories. Successful history productions involve archives in the backend in exchange for discounted and deferred fees.		
FIELD PRODUCTION	Natural history requires less time in the field than blue chip, or typically one to four months per program hour. This holds true across all genres. At the lower budget levels, wildlife producers may focus on domestic animals or rely on controlled locations such as game parks and zoos. Library material may be used to supplement original sequences. Less than eight weeks in the field are typical for this level of natural history, and fewer for other genres. Producers in many genres use dramatic recreations to advance the story line, though this practice may have peaked due to audience weariness with these contrivances. Production is based on a mix of film and video.		
POST-PRODUCTION	Editing time is scaled to the level of investment, format and deadlines. The time available for pre-edit planning, editing and writing is a key benchmark for production quality. Observational documentaries rely on outstanding writing. Original music tends to be limited to title sequences and a key theme.		
FORMATS ("C")	The format level represents a strand of newly originated, entertaining and innovative television programming produced in a format that provides nuggets of information on a theme or subject. Formats include presenter-led studio-based shows, game shows, travelogs, location-based, live-to-tape productions, thematic magazine programs covering science and other topics, historical "clip shows", contemporary portraits and fly-on-the-wall documentaries. Masthead television is a very difficult format that typically links magazines and other publications with television programming. (See lifestyle formats at right.)		
	<i>Hollywood Pets</i> (September Films/ITV/Animal Planet)	<i>Trauma: Life in the ER</i> (NY Times Television/TLC), <i>Beyond 2000</i> (Beyond International)	<i>The Real World</i> (MTV) <i>A Baby Story</i> (TLC)
BUDGET (PER HOUR)	The range across all reality-TV genres is \$US5,000 to \$US200,000. The lowest end of the range applies to factory-produced, studio shows.		
SPECIALIZATION	Formats serve as the context for popular entertainment, no matter which genre. Therefore experience in format production is significantly more important than subject expertise. Various formats require special sets of production expertise, for instance in audience "wrangling" for certain studio formats, and in field reporting skills for the thematic magazine and "docu-soap" formats. The ability to anticipate changes in trends is a key success factor for format productions.		
DEVELOPMENT AND PRE-PRODUCTION	In the U.K. and Europe, most format-category shows are commissioned by networks. Development practices in the U.S. are a mix of deficit-funded syndication and network commissions. Most Public Broadcasting System programs are underwritten by corporate sponsors or foundation grants to at least the breakeven level. The producer's profits, if any, are earned from ancillary marketing. Cable networks control ancillaries. Experience in pre-production planning is needed for format-based television.		
FIELD PRODUCTION AND POST-PRODUCTION	Because most studio and location-based productions are shot live-to-tape, post-production mainly involves clean-up. The fly-on-the-wall documentary format relies on a highly skilled and efficient editing process and writing. Field sequences are usually captured on video.		



MTV Unplugged

The History Channel's
World War II in Color

Suzuki Great Outdoors on ESPN



Homes With Style on E!'s Style

ARTS & CULTURE	HISTORY	ADVENTURE	LIFESTYLE
A researcher's and director's genre that is driven by a specialized ability to understand the (usually) highbrow arts, their creators and their cultural and historical contexts. <i>The Sistine Chapel: Return to Glory</i> (NHK)	History is driven by a fresh vision to create authoritative and definitive reporting of historical events. <i>Finest Hour</i> (Brook Lapping Productions/ BBC1/ WGBH-TV/The American Experience)	A very difficult, event-based genre devoted to capturing highly dramatic, never-before-seen adventures. It usually involves a risky expedition to a remote location and a "man-versus-nature" theme. <i>Treasures of the Deep</i> (Dr. Robert Ballard, National Geographic Television)	Lifestyle is entirely format-driven and refers to content that is dedicated to helping people lead healthier, more active and interesting lives. The underlying message of the genre is "aspirational" rather than instructional.
Blue chip arts & culture is deeply studied and requires outstanding research expertise and unique access to stories. Specialization includes the performing arts and the visual arts.	History is a researcher's and director's genre that is based on unique access to locations, unfamiliar archives, and to the untold stories of compelling eyewitnesses.	Production teams tend to be formed for a single expedition. There are specialists in sub-genres, such as extreme high-altitude mountain climbing and deep-sea exploration.	Topics and hybrids include cooking, home & garden, fashion and style, health, nutrition & fitness, hobbies and do-it-yourself, travel, collecting, hunting and fishing, computing, popular spirituality and pets.
Storytelling is often helped by high-end production technology that creates new ways of looking at an artist's work. Dramatic reenactments of an artist's technique may advance the story for topics that predate the film archive.	Due to audience fatigue, the popularity of elaborate dramatic reenactments of historical events may be declining.	Requires the resources and expertise to plan the capture of a unique and short-lived story, usually with a multi-camera crew using cutting-edge field technology.	There is no blue chip lifestyle programming, though certain formatted series are budgeted at the blue chip level to afford celebrity, talent and distant locations. One example is <i>Gardens of the World</i> with Audrey Hepburn.
<i>The Phil</i> (Diverse Productions/ Channel 4/NVC Arts/Ovation)	<i>Great Romances 1 & 11</i> (Nugus Martin Productions/ BBC Worldwide/ The History Channel and others.)	<i>Wild Rescues</i> (Termite Art Productions /Animal Planet)	However, there are several blue chip lifestyle assets, including <i>Martha Stewart Living</i> and <i>Two Fat Ladies</i>.
\$US150,000 to \$US300,000	\$US80,000 to \$US400,000	\$US100,000 to \$US300,000	Examples of series are <i>Gourmet Getaway</i> (Robin Leach & The Food Network), <i>Cucina Amore</i> (West 175 Productions/ PBS), <i>Ready, Steady, Cook</i> (BBC/ Endemol), <i>Antiques Roadshow</i> (BBC & WGBH-TV)
			PRODUCTION PRACTICES
			Production costs range from \$US5,000 to \$US200,000 per hour. The lower figure applies to factory-produced, studio-based productions.
			Successful producers have the commercial expertise to implement a trend-driven production and marketing effort that integrates an array of branded media products, merchandise and packaged events.
			Marketing icons are often built into formats from the first episode in order to avoid regulatory problems.
			Many lifestyle producers offset costs through product placement (kitchen equipment, for example) and sponsored services such as airline travel.
			Many formats are presenter-led, and many presenters are novices. Talent management is the biggest challenge faced by lifestyle producers everywhere.
			EXPORTABILITY
<i>Rock's Greatest</i> (VH1)	<i>Spies</i> (A&E/Columbia House Video)	At the format level, the adventure genre loses its edge and moves into travel/lifestyle.	Many more dedicated slots are emerging worldwide, especially on digital platforms. However, export opportunities are limited by the distinctive tastes of each market and by the low-cost opportunity this situation creates for local producers.
			Travel programs are rarely exportable due to the different destinations and modes of travel preferred in each market. Celebrity-hosted series are the exception.
			<i>Antiques Roadshow</i> (BBC & WGBH-TV) is a rare example of a successful format transfer.

BY JOSHUA GOODMAN

A

MID THE SEA OF CORPORATE logos dominating Santiago's jagged skyline are political advertisements promising *Crecer con Igualdad* —

Growth with Equality. The campaign slogan, alluding to Chile's much-revered economic model, belongs to the ruling coalition's presidential candidate, Ricardo Lagos, who at presstime was leading this month's electoral run-off. The message is reassuring to Chile's conservative-minded electorate, which values the country's status as one of Latin America's most economically stable, a privilege that came about during more than a decade of authoritarian rule.

Until recently, that slogan could have applied to the country's leading cable duo of VTR Hipercable and Metropolis-Intercom. The two multiple system operators (MSOs) emerged in the mid-1990s as the undisputed titans of the country's 700,000-subscriber-strong cable industry. With the market divided almost evenly, they cooperated with each other so closely, albeit informally, that at one point they even discussed a merger — and were accused by some programmers of working a little too collusively when it came to negotiating their rates.

But a slowdown in Chile's pay TV sector helped loosen the ties that bound this relationship. And advances in broadband technology, which brought about the prospect of offering telephony and data services, have fanned the flames of competition once again. A winner has yet to be declared in what promises to be a dogged battle. But, according to industry executives, VTR's surge forward in new services could accelerate an eventual ownership realignment at what some describe as its less aggressive rival.

There's another duo doing battle on the direct-to-home (DTH) satellite front. Panregional platforms Sky Latin America, backed by News Corp., and Galaxy Latin America's DirecTV both provide their services in Chile. Despite entering the market a year-and-a-half earlier than Sky, Galaxy is losing ground to its rival. Currently, Sky has 35,000 Chilean subscribers, while DirecTV has about 15,000, according to industry sources. The platforms decline to reveal country-specific numbers.

In cable, VTR has upped the ante since becoming the first Latin American MSO to offer telephony service two years ago. At that time, investing heavily in its fiber network and expensive cable-telephony technology that was only just beginning to win reception in the United States (and was virtually unknown in emerging markets such as

Chile), was viewed as a pipe-dream.

"Everyone said it wouldn't work and that we were embarking on a crash course," VTR president Blas Tomic says with a grin at the company's posh Santiago headquarters. And he might get the last laugh.

With 70,000 telephony customers, VTR's telco business lies at the heart of an aggressive strategy to upstage its cross-town competitor and become a leading broadband-services provider. This year, VTR aims to expand its telco service to eight cities from three, as part of a \$US300 million investment. By 2003, it aims to provide phone service to 21 cities and 400,000 homes, a figure that would represent 60 percent of its current pay TV subscriber base.

Lofty? Sure. But the company racked up 50,000 new telephony clients last year, and is currently adding new ones at the rate of 5,000 per month. VTR also has a license to provide long-distance telephony, and is launching high-speed Internet access.

The catalyst for VTR's advances come from its owner, UnitedGlobalCom Inc. (UGC). Last April, the Denver-based company paid \$US258 million, or about \$US1,300 per subscriber, for the 60 percent of VTR that it didn't already own. The decision to prioritize Chile over larger Latin territories such as Argentina, where the pay TV market is nearly six times bigger, was an easy one, says UGC regional vice president Jim Clark. "Chile has all the key fundamentals that we look for: foreign investment is welcomed, laws are transparent and the economy is stable," he notes. "Chile is setting the trend that other markets are only now beginning to follow."

According to Tomic, the financial muscle and operating know-how provided by UGC will enable VTR to push its now relatively new strategy to the next level. And this will allow it to compete in earnest with Chile's dominant telco player, Compañía de Telecomunicaciones de Chile S.A., which owns 40 percent of Metropolis.

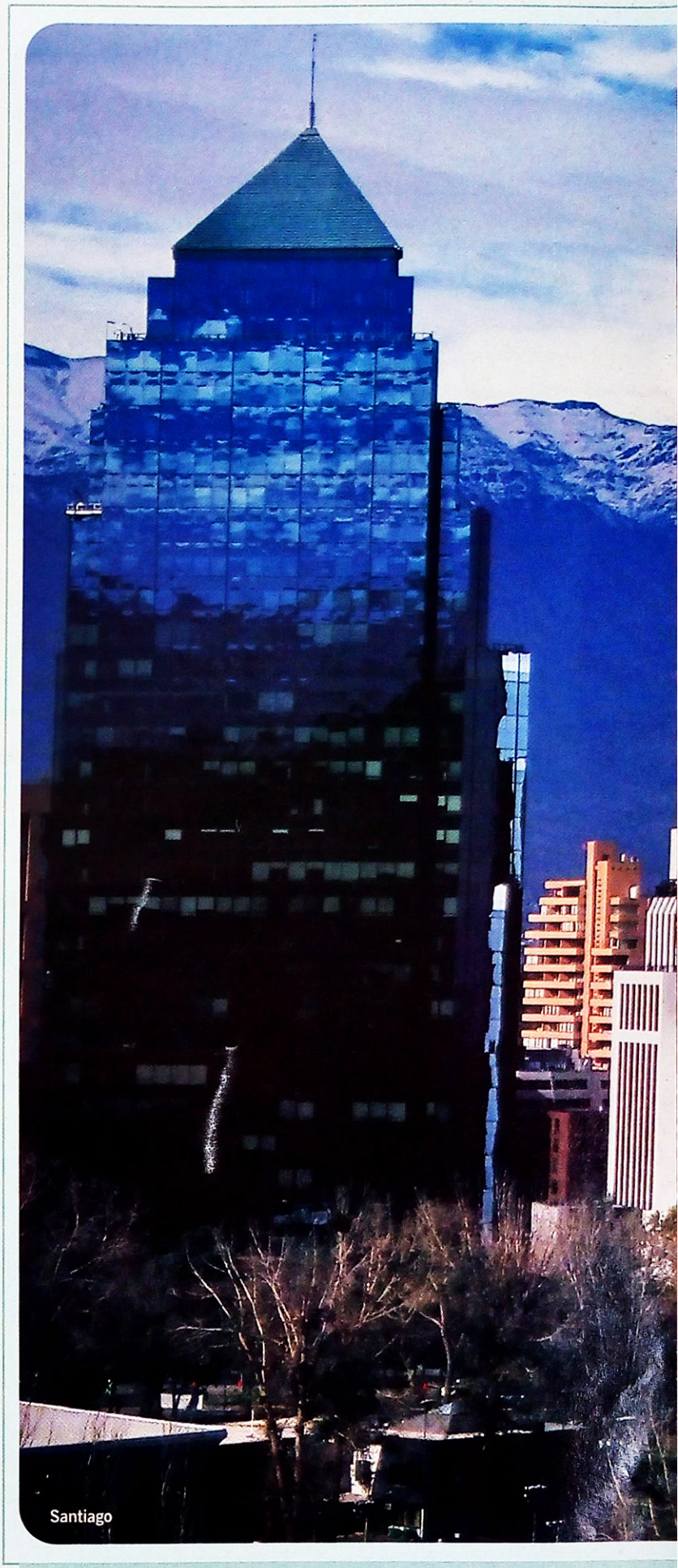
"VTR suffered for a long time because its shareholders and management grew accustomed to a sort of merger-and-acquisition mentality that was based on making a strategic sale down the road," he recalls. "Now, with UGC in full control, we'll be able to focus on developing our systems and becoming as integrated as possible in the shortest time period possible." As a testament to VTR's rejuvenated spirit, Tomic says, the company has laid off or replaced 20 of its top 25 executives since UGC took full control. Former employees, however, allege that the dismissals were dictated by

UGC merely as an effort to cut costs.

Even if VTR doesn't meet its noble goals, the telecom offensive is likely to turn its traditionally warm relations with its main competitor frigid. According to sources close to Metropolis, VTR's broadband initiatives have generated concern because its own lack of a similar strategy could eventually cost the company clients and markets share. And the rivalry is only exacerbated by the fact that today the companies compete in about 90 percent of the areas where they operate, up from 25 percent a few years ago.

In contrast to VTR's ambitious expansion plans, Metropolis has seen its wings cut by a drawn-out legal battle among shareholders over how to split revenue from a still-nonexistent Internet service. At issue is a \$US100 million lawsuit slapped against CTC by Comunicaciones Cordillera S.A., its partner in Metropolis. Cordillera is a 50-50 joint venture between AT&T Corp.'s Liberty Media International Inc. and Chilean shipping tycoon Ricardo Claro.

Though none of Metropolis' investors would comment officially on the out-



Chile's Dueling Duos

After years of cozy competition, there are signs that Chile's two cable titans are heading toward confrontation. All the while, two DTH challengers plunge into the fray.



CHILE at a Glance

Population:	15 million
Per capita gross domestic product:	\$US4,990
Average annual GDP growth ('94-'98):	6.9 percent
Homes:	3.5 million
TV penetration:	95 percent
Cable TV penetration:	20 percent
VTR Hiper cable subscribers:	389,900
Metropolis-Intercom subscribers:	269,000

SOURCES: Chilean National Statistics Institute, Finance Ministry, National Television Council, VTR Hiper cable and Metropolis-Intercom.

come of the arbitration, most discount the possibility of a ruling before April. And once issued, it is likely only to order all sides to return to the bargaining table to hammer out a mutually acceptable exit strategy. "It's not unreasonable to contemplate that a resolution could involve a change in ownership and assets," Liberty's managing director for Latin America Greg Armstrong says.

That scenario would have been impossible to imagine just three years ago, when VTR, then controlled by an investor group led by Chile's powerful Luk-

sic family, was on the verge of being acquired by CTC. Though antitrust concerns and the Luksic's high asking price eventually derailed the deal, the merger talks ushered in a new era of close cooperation — collusion, according to some — between VTR and Metropolis.

A former executive who participated in those talks says the two MSOs met regularly during 1996 and 1997 to adopt a number of under-the-table agreements to divvy up the market and defend their common financial interests — that is, negotiate more fiercely with program-

mers. The executive alleges that this eventually led to some pretty bold acts, including the decision to drop premium channel HBO Olé from their lineups in an effort to renegotiate their contracts.

But like most marriages of convenience that end when one partner outgrows the other, this secure existence was eventually shelved when VTR spotted an opportunity to overtake Metropolis. The first shots were fired in April 1998, say industry sources, when VTR launched a pay-per-view package in an attempt to penetrate Metropolis' tradi-

tional stronghold of Santiago's wealthier neighborhoods. That decision to go against the gentlemen's agreement angered Metropolis, which three months later was forced to introduce a similar tiered strategy.

The biggest blow, however, could still be on the way if VTR sees continued strength in telephony, reckons Stephen Barnes, a Santander Investment analyst in Santiago. "The success of cable companies in today's converging telecommunications and media markets will de-

Continued on Page 40

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A World of Innovation

Last month's Western Cable Show in Los Angeles was important on a global scale for two important reasons. First, it demonstrated that interest in and demand for broadband-multimedia networks is hot not only in North America, but throughout the world. Secondly, there was clear evidence that technological leadership is no longer only the domain of U.S. companies.

Perhaps this was best exemplified by the announcement that MediaOne Group Inc. had deployed in Jacksonville, Fla., North America's first set-top featuring an "open" conditional-access protocol.

This event is important because U.S. cable operators are under a legislative mandate to allow set-tops to be sold at retail outlets. But more importantly, it shows that at least one multiple system operator is willing to bet that an open network will ultimately lead to new manufacturers building equipment, and more content providers writing applications to run on such platforms.

In this case, MediaOne married the expertise of Netherlands-based Philips Electronics N.V., Divicom Inc. of the U.S., and France's Canal Plus S.A. to create this environment. That's significant because it marks the first time a major U.S. cable operator looked to European companies to provide a solution for deployment within North America.

Perhaps sensing a shift in mindset, last month's Western Show saw significant participation by other non-U.S. broadband companies, including:

- chello broadband N.V. The high-speed access provider owned by United Pan-Europe Communications N.V. announced it had passed the 100,000-subscriber benchmark, making it the largest broadband-Internet service provider in Europe.
- Yes Television. The London-based company uses Internet technology to deliver video-on-demand services to cable-TV and digital-subscriber-line set-tops.
- FutureTV of Hong Kong provides network operators with the ability to offer subscribers "personalized" TV through a variety of video, data and audio applications. The hardware/software system can store and manipulate a huge volume of content.
- Lysis S.A., a Swiss company, provides software to manage and deliver digital content over digital-TV channels and the Internet. The firm said it had acquired Concision Ltd., a provider of software to manage intellectual-property rights to various content.

Other global companies hoping to crack into North America were on hand in Los Angeles. They included Israel-based cable-modem supplier NetGame Cable; Belgium-based headend-equipment supplier Barco; Swedish telecommunications giant Ericsson A.B.; and transmitter manufacturer (and Thomson S.A. subsidiary) Thomcast Communications of France, to name but a few.

Clearly, the message for all attendees was that "cable TV" has become a global industry. As has been noted in various forums this year, including *Multichannel News International's* Summit 2 last May, product and service innovation is no longer the exclusive territory of North American companies.

BY ROGER BROWN



IN
SYNC

More Brains in the Box

BY HANK HOGAN

This is a tale of two cities. However, unlike the Dickens novel, this isn't about the worst of times and the best of times. Instead, it's about building communities and new revenue streams from digital set-top-box technology that increasingly resembles that of the personal computer in capabilities and horsepower. For cable and satellite operators, it's a story that over the next year could lead to added revenue from myriad new services that the technology will make possible.

Consider the virtual city being built by British multiple system operator (MSO) Telewest Communications plc as one example. The company is rolling out interactive-television services based on a set-top built by Pace Micro Technology plc, says Bill Welsh, Telewest's manager of digital-interactive TV. With an 80 million instruction-per-second (MIPS) microprocessor and an in-



Scientific-Atlanta and other set-top makers are developing ever-more-capable products

tegrated DOCSIS cable modem, the box enables Telewest to offer subscribers a virtual city that could generate real revenue.

"There will be what we call a 'walled garden' of Web sites, with content partners such as banks

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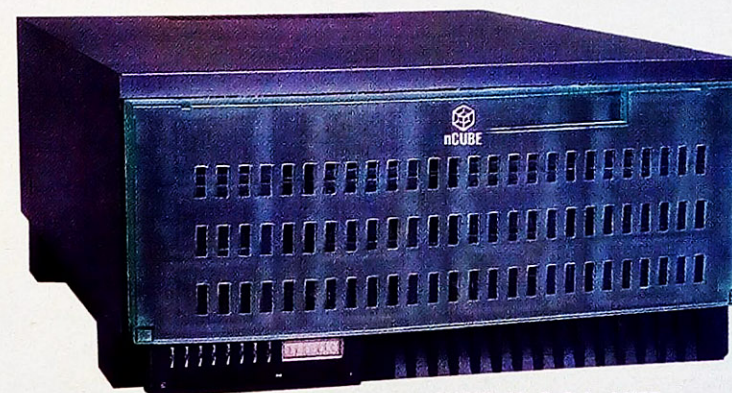
Pumping Up the VOD Volume

Cable and ADSL Make Advances in the United Kingdom

BY JAMES CARELESS

"Test bed" is a term that British pay television companies are used to hearing when people describe their industry. After all, it was where cable-telephony systems first started to emerge. And there's now a three-way battle between digital-terrestrial TV (DTT), direct-to-home TV (DTH), and cable TV that few other markets are experiencing.

But now, the term "test bed" is extending even further, as an increasing number of video-on-demand (VOD) projects emerge, picking up the ball from leading-edge trials that have emerged in markets such as the United States and Hong Kong.



nCUBE's MediaCube4 VOD server

Among the more aggressive players is Yes Television, which last October rolled out VOD on Kingston Interactive Television's asymmetrical digital-subscriber line (ADSL) network in Hull, Yorkshire. Yes TV, which pro-

vides services and content for VOD platforms, uses nCube's MediaCUBE video servers to deliver streamed VOD to 1,500 subscribers. Another 155,000 customers are due to be added to the

Continued on Page 31

Box,

Continued from Page 25
and retailers and travel companies so that they can get their Web content onto our set-top boxes," explains Welsh.

In another example, there's the real city of Amsterdam, home to MSO United Pan-Europe Communications NV (UPC). There,

UPC will deploy a Digital-Video Broadcasting-compliant version of General Instrument Corp.'s 5000 series set-top, which features a 300-or-more MIPS microprocessor, 32-bit 2D/3D graphics, an integrated DOCSIS cable modem, 14-plus megabytes of memory, and the ability to interface to a hard drive. UPC managing director of

technology Scott Bachman says the agreement between the city and the MSO will lead to a deep penetration of the advanced set-top box into Amsterdam. As a result, anyone in the city will be able to get an e-mail address and basic Internet connectivity.

But for UPC, a universally available box now means money later.

"We think it then becomes a great platform for being able to add services for people over time when they want them, and it gives them a lot of choice," says Bachman.

The array of possible services is widened by the capabilities inside the box. For instance, the set-top has three separate tuners. This makes it possible for subscribers to

watch video programming, surf the Web, and conduct a phone conversation at the same time. That opens up both the Internet and telephony as potential revenue streams.

Bachman notes that in Vienna, Austria, where UPC has a franchise that passes 1 million homes, telephony installs are already averaging 1,000 a week, with Internet installs running at slightly more than 1,300 per week. With a more advanced set-top box in every home, those numbers could grow even larger. Therefore, Bachman says that UPC hopes to repeat the Amsterdam model and deploy the devices as widely as possible.

But Internet connectivity and telephony aren't the only new revenue streams made possible by the increasingly PC-like nature of



An advanced set-top "becomes a great platform for being able to add services."

— Scott Bachman, managing director of technology, United Pan-Europe Communications N.V.

set-top boxes. For instance, Scientific-Atlanta Inc. is debuting a new set-top box, the Explorer 6000, in mid-2000. Tony Wasilewski, chief scientist for the company's subscriber-networks sector, notes that the Explorer 6000 will have two processors that will boost the box's rating to more than 300 MIPS. The addition of the second processor means that one will always be free to operate additional applications, while the other provides basic functionality. The Explorer 6000 also has an optional three-dimensional graphics engine that could foster the development of new subscriber services.

"We're taking the graphics per-

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formance of the platform, the 6000, up to the point where you can literally do fast-twitch games and run the sort of things you see on the current game players," says Wasilewski.

These advanced set-top boxes could soon show up in the U.S. and abroad, according to Wasilewski. In addition to deployments in the U.S. with Time Warner Cable and Cox Communications Inc., among others, S-A has been working with international operators such as Chile's Metropolis-Intercom; the Menta Group in Spain; and an undisclosed European cabler to deploy these set-top machines.

TECH OBSTACLES

However, MSOs and set-top-box manufacturers have yet to implement two technical innovations: hard-disk drives and network connectivity. There are several reasons for this, both technical and otherwise.

Hard-disk drives are already showing up in personal-video recorders, a category pioneered by TiVo Inc. and Replay Networks Inc. The devices allow viewers to pause and resume live television mid-stream. The devices are able to do this thanks to a multi-gigabyte hard drive that stores the video and audio streams for playback at a later time. Microsoft Corp.'s WebTV Networks Inc. currently makes the only large set-top box that offers a product with a built-in hard disk. The 8.6-gigabyte hard disk is included inside the set-top received by subscribers to EchoStar Communications Corp.'s DISH Network direct-to-home service. The EchoStar Model 7100 is the result of a partnership between WebTV and EchoStar. However, analysts don't think that this will be the last word in set-tops with hard disks.

"Probably the hottest product that's coming along are these personal-video recorders, like TiVo and Replay, that make it possible to record programming on a hard drive," notes Josh Bernoff, principal analyst for television at Cambridge, Mass.-based Forrester Research Inc.

Bernoff, who has both a satellite receiver and a TiVo set-top in his own home, reports that getting the two to coexist isn't easy and requires a bit of technical sleight-of-hand. He notes that this is a less-than-ideal consumer solution and expects that hard-disk technology will be incorporated into set-top boxes.

Bernoff may be right. The Explorer 6000, for instance, will include a hard disk when it hits the

market, while the GI box comes with a built-in, industry-standard interface for a hard disk. Pace, which makes products to operator specifications, is planning to put a 24-gigabyte hard drive into some of its set-top boxes in the coming year. Neil Gaydon, president of Pace Americas, notes that the inclusion of a hard drive may bring

about some competitive changes between cable and satellite.

"One of the shocks of putting a hard drive in a box is suddenly the back channel isn't quite as big a deal because you're able to download that amount of information," he remarks.

Others aren't so sure that hard drives are the way to go, at least

not yet. Telewest's Welsh says that the technology is interesting, especially as a complement to video-on-demand. However, Telewest doesn't have any plans to deploy set-top boxes with on-board hard disks. Bachman of UPC notes that the modularity of the GI box means that a hard disk can be added later, but so far, he hasn't

committed to using it.

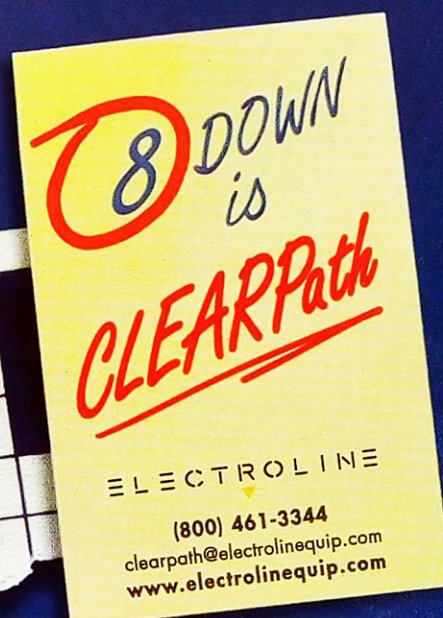
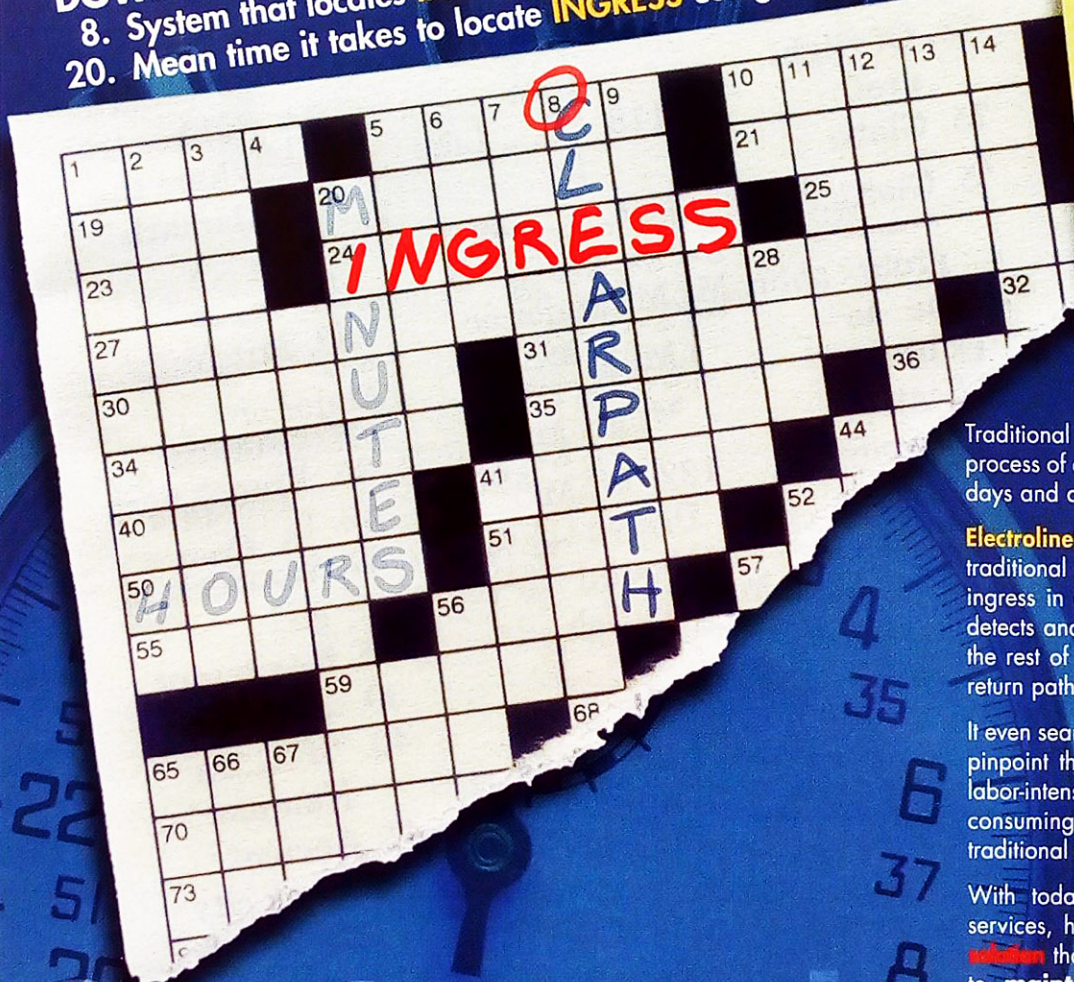
Still, the cost per megabyte of hard-disk storage is dropping by a factor of two every year, making the product-cost-versus-revenue-stream equation subject to rapid changes, especially if personal-VCR technology proves popular.

As for network connectivity, Continued on Page 32

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China's Electrifying Telecoms Business

Upgrades Nationwide Promise a Technical Revolution as Companies Eye Swelling Internet Market

BY ROGER BROWN

Much like a child looking longingly at delicious treats through the window of a shuttered candy store, telecommunications companies around the world are poised to jump into China's burgeoning market, but find themselves being held back by regulation.

China's expanding economy and a population that's unmatched are causing the telecom market — including telephony, Internet access and cable TV — to expand at unprecedented rates. And although the regulatory landscape is still dominated by isolationist laws, there are signs that the market could soon open up to foreign investment.

For example, direct investment in television programming by non-governmental interests is still prohibited, but no such ban exists on the infrastructure itself. However, ownership of the networks is still restricted to China-based companies. And they're taking advantage of it. There are now at least seven publicly traded companies that are buying up several



China's Yunnan Province

of China's cable-television systems, becoming multiple system operators.

That trend, coupled with China's agreement last year with the U.S. concerning entry into the World Trade Organization, is making many manufacturers of

cable-TV and telecom gear optimistic about the country's near-term potential for companies based beyond its shores.

China has central-office-exchange capacity of more than 135 million telephone lines, making it the second largest telephony net-

work in the world. But despite the capacity that's been put in place, there are only about 11 million telephone customers in China. Still, pent-up demand and a government focus on growth is expected to result in an average deployment of 40 million telecom

lines every year over the next 20 years. That's according to professor Qian Zongjue, principal senior engineer of the department of science and technology for China's Ministry of Information Industry, who spoke recently at Information Gatekeepers' China Telecom 2000 conference in San Francisco.

The MII is the government body in charge of regulating telecom and cable TV networks in China.

Growth of Chinese Internet users has been equally astounding. "Internet usage boomed from a few people to 2 million in the last year, and by the end of September 1999, the number of Internet users reached over 4 million," said Qian. He predicted China's Internet-user base would swell to 6 million by the end of last year.

In order to foster growth of the telecom industry, the Chinese government over the past few years has taken steps to encourage competition among service providers. Just last fall, China Network Communications Corp. (China Netcom) was launched. This third major telecom company is using \$US50 million in government funds to offer high-speed data services to big businesses and Internet-service providers in 15 cities.

Additionally, China Netcom has received a permit from the MII to provide Internet-protocol telephony trials. It is the fourth operator to obtain IP-phone-service licenses after China Telecom, China Unicom and Ji Tong Communications. The company will first operate its IP-phone services in 15 cities, including Beijing, Shanghai, Guangzhou and Wuhan.

It is via this network and company that China's loose collection of cable companies could benefit most. As in many other countries around the globe, at least one Chinese official sees the value of offering Internet access over cable infrastructure — a notion that is currently prohibited under government regulation.

Fang Hongyi, chief engineer for cable networks under China's State Administration of Radio Film and Television (SARFT) — the state organization responsible for coordinating China's frag-

Continued on Page 30

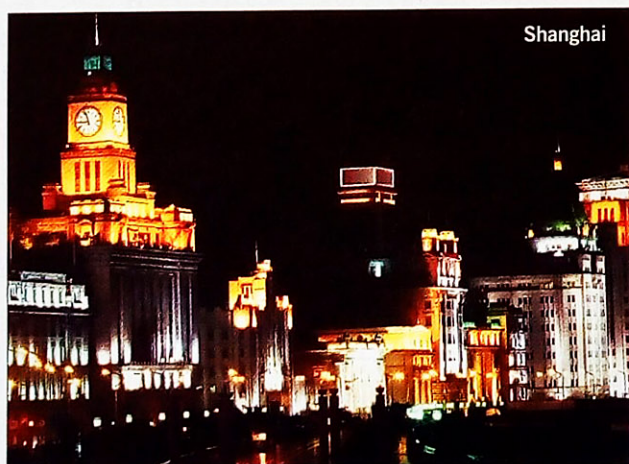
Fortunes Told

The telecom market in China is expected to continue grow steadily, due largely to increased government spending to pull the economy along. The following are forecasts for China's telecommunications market based on information from the Ministry of Information Industry.

■ **Central-office (CO) switches:** By this year, CO-switching capacity is expected to reach 160 million lines, and mobile switching will reach a capacity of 56 million lines. A minimum of 19 million lines of CO-switching equipment were installed in 1999.

■ **Private-branch exchanges:** The demand for PABXs has been declining over the last several years. The demand was expected to reach 2 million to 2.5 million lines in 1999. There are 150 PBX manufacturers in China, with annual production capacity of 7 million lines. Supply is much greater than the demand.

■ **Cellular:** By the end of 1997, the mobile switching capacity in China had reached 24 million lines. Mobile switching capacity reportedly reached 34 million lines by the end of 1998. In 1999, the increase in mobile exchange capacity was expected to be in the



range of 10 million to 11 million lines.

■ **Telephones:** The annual telephone production capacity in China has reached 100 million to 150 million units. For the past several years, an average of 35 million to 40 million phones were sold annually, and 60 million were exported. The value of the telephone-receiver market — including units sold in China and abroad — was expected to reach anywhere from \$US96 million to \$US121 million.

■ **Modems:** Modem sales in China were expected to reach about 1 million units in 1999, with a market value of \$US180 million to \$US242 million. Dial-up 56 Kbps gear was expected to account for a significant amount of those sales.

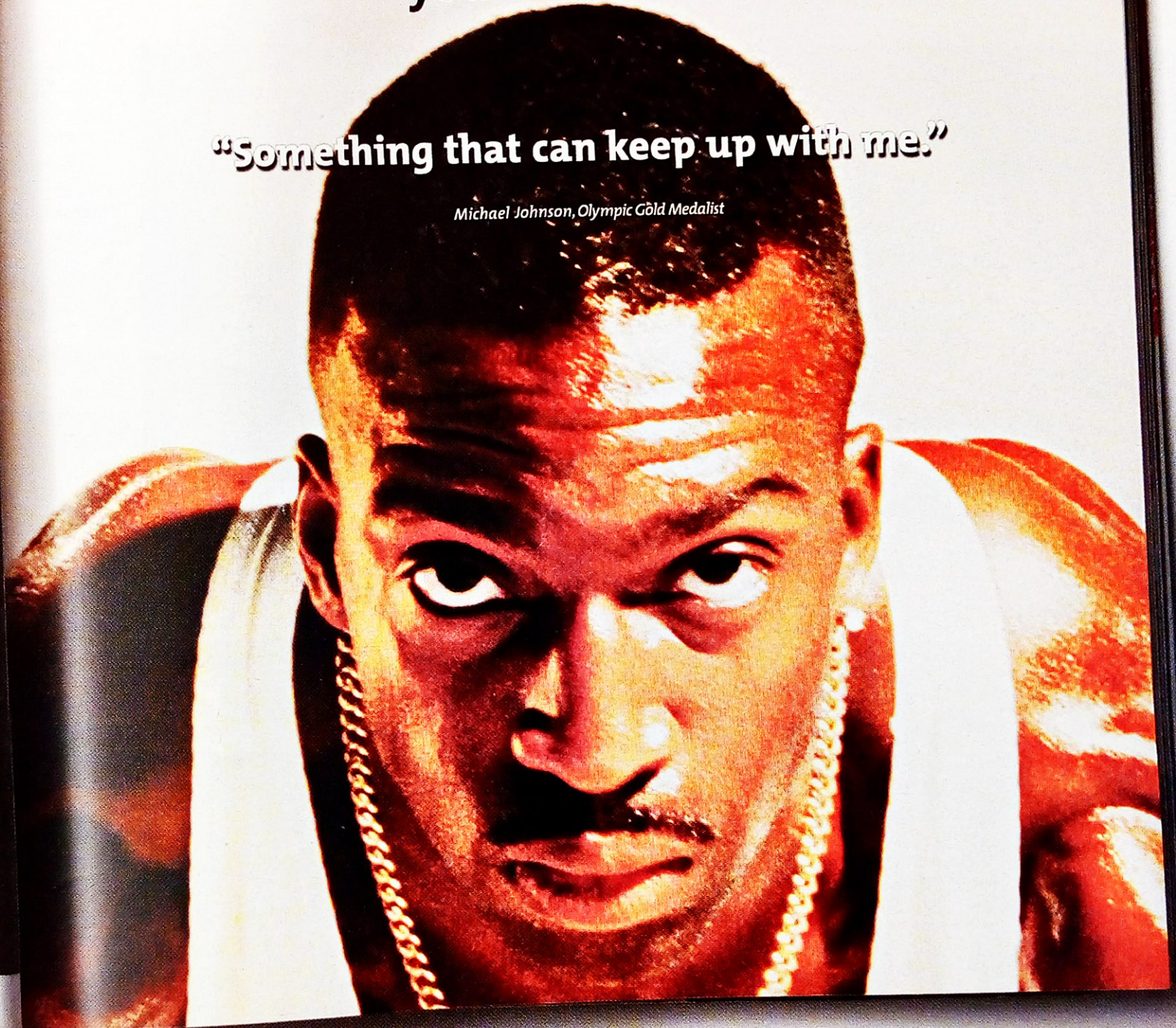
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China,

Continued from Page 28

mented but huge network of cable operators — was quoted last autumn saying that the SARFT had developed a plan to deliver high-speed, low-cost Internet access to China's estimated 80 million cable-television homes.

"We're going to take the Chi-

nese people into the Internet age in one shot," Fang told a news agency. He said SARFT had already begun small-scale tests in a handful of cities.

But the proposal is fraught with several political, financial and regulatory obstacles that need to be cleared by the MII before mass deployment can begin.

The service would rely on China Netcom's 15-city Internet backbone as its core. From there, SARFT's loose network of cable-TV operators would transmit the Internet to individual homes.

The plan calls for subscribers to receive high-speed service for a one-time fee of 500 yuan (\$US60) plus 50 yuan (\$US6) per month.

Subscribers to China Telecom's Internet service pay about 200 yuan (\$US24) per month. SARFT would also allow people to set up Internet service provider (ISP) companies on its network for a fraction of what China Telecom charges ISPs to tap its network.

Major obstacles outside of opposition from MII that could

threaten such a plan include the cost of network upgrades to make the cable networks interactive, as well as the high cost of Internet-protocol-based equipment.

Fang said the plan had support from Premier Zhu Rongji and President Jiang Zemin. "The MII wants strongly to stop the plan, but it's unstoppable," he was quoted as saying.

Others believe television will be the device through which many Chinese consumers access the Internet.

"The Internet revolution will occur over the TV," says T.S. Wong, president and CEO of MyWeb Inc., a company that uses a proprietary set-top to transport

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China's State Administration of Radio Film and Television may allow people to set up Internet service providers companies on its network.

Internet content to the television over twisted-pair copper lines.

He backs his case by citing that there are already 450 million TVs in China, compared to just 12 million personal computers. And because PCs often cost \$US1,000, or almost 40 percent of the average annual salary of a Chinese citizen, Wong says the MyWeb TV set-top will prosper, even at \$US180.

MyWeb already has a deal with Beijing Telecom to deploy 200,000 set-tops. A separate agreement calls for Philips Electronics to integrate the technology into TV receivers earmarked for sale in China.

Late last year, the company launched its home Internet service, allowing customers to access the Internet via their TVs through set-tops linked to MyWeb's Chinese-language portal, MyWeb On-line China (www.myweb.com.cn).

With regulation slowly but surely relaxing, and pent-up demand from Chinese citizens who appear willing to communicate with both among themselves and the rest of the globe, the future for telecom providers in China, including cable operators, appears rosy, to say the least. ■

Britain,

Continued from Page 25
network in the near future.

Kingston offers VOD streams at 4 megabits per second (Mbps), thanks to nCube's file servers. Yes TV head of marketing Steve Garvey says the 4 Mb video stream is important to Hollywood studios, which generally will not allow movies to be shown below this minimum benchmark because they fear the quality will be too low.

Nevertheless, Yes TV is also talking to British Telecommunications plc about accessing its ADSL commercial rollout of VOD, which calls for bit rates of 2.3 Mbps. "In a year or two, I am confident that we will no longer even be mentioning these problems," says Garvey. "Everyone will accept much greater compression."

Britain's cable systems don't intend to let the two ADSL projects steal all the VOD thunder, however. Multiple system operator (MSO) Telewest Communications plc is currently testing VOD equipment from SeaChange International and nCube. Telewest, which serves more than 1.4 million U.K. cable subs, will trial VOD to more than 10,000 households.

Beyond ensuring that the SeaChange and nCube servers can do the job, the Telewest trials will also test "some of the more subtle things" associated with VOD, says Yvette Gordon, SeaChange's vice president of interactive technologies. The issues include "things like how many people is it going to take to run a video-on-demand system?" she says. Other questions pertain to "what kind of skills do they have to have, [and] does VOD really fit into a cable environment in such a way that technicians can run this system, as opposed a cable operator having to hire a significant amount of staff?"

Meanwhile, MSO NTL Inc. has gone a step further: It's deploying commercial VOD in mid-2000, using Diva Systems Corp. software and servers. The new service will replace NTL's existing near-video-on-demand service on digital channel 55. "We're making a commitment to video-on-demand, as opposed to trialing," says Roger Simkin, NTL's senior product development manager for VOD. "We feel the year 2000 is the time to kick into video-on-demand fully." NTL isn't giving Diva exclusive-supplier status. Instead, "we've made the strategic decision that we want two video-

on-demand vendors," says Simkin. In this way, "we're not roped into one technology."

NTL is extremely important to Diva, says Garry Stephen, Diva Europe's managing director. Small wonder: as one of NTL's two VOD suppliers, Diva stands to garner a lot of business if NTL successfully acquires Cable & Wire-

"We feel the year 2000 is the time to kick into video-on-demand fully."

— Roger Simkin, senior product development manager for VOD, NTL Inc.

less Communications plc's residential cable-TV operation. Should the deal receive government approval, NTL will have

about two-thirds of the cable households in the U.K., says Stephen. "That's about 12 million [subscribers]."

VOD projects are mushrooming in the U.K. because operators are aggressively deploying digital systems in an attempt to outshine the DTH, telco and DTT competition. They're aided by a trend that's seeing the cost of server farms decline rapidly, while their capability increases. Suppliers like Diva have driven down "the cost



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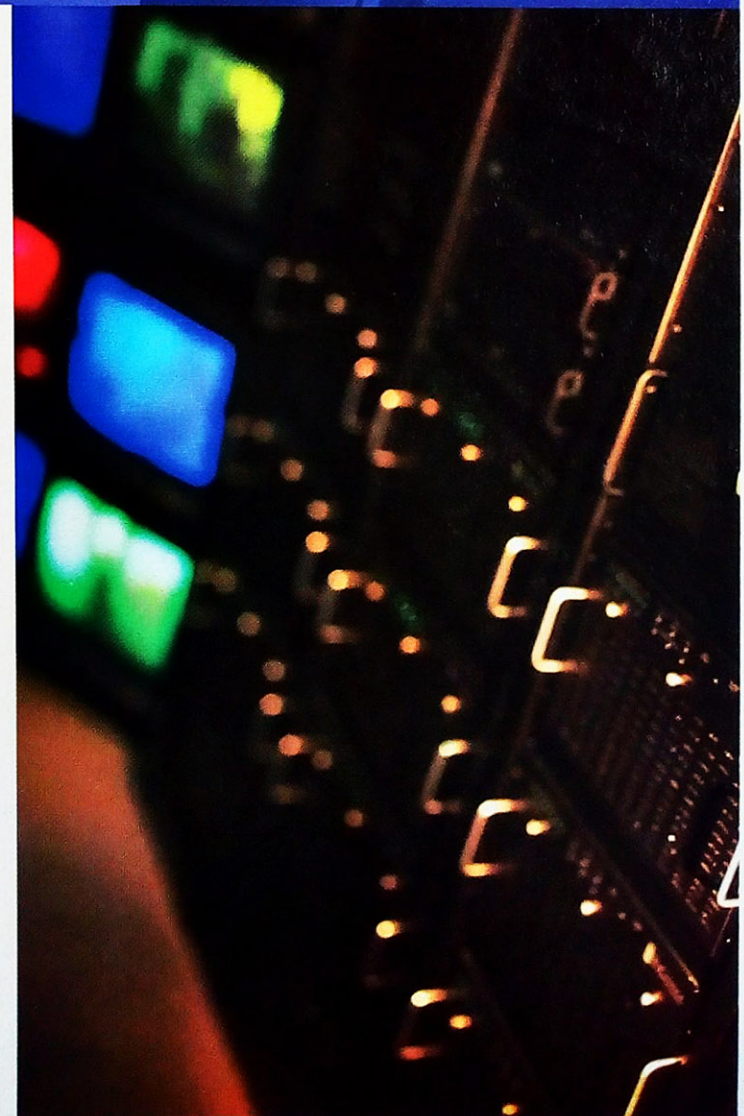
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of the hardware by integrating more and more of the components," says Stephen. "Another thing that we did that was strategically very clever — and this was long before I joined the company — is focus not just on the server, but also on the transmission equipment that is required in the headend."

In other words, Diva has worked to cut hardware costs throughout the entire equipment chain, including up-convertors and modulators. The result is a VOD system that cable MSOs can afford to deploy.

The two-way network infrastructure that is deployed in Britain also makes it a breeding ground for VOD. "It's probably [got] some of the most up-to-date networks in the world," Stephens

says. "You've got fiber going down to a 500-home node. Very little upgrade is necessary, if any."

What's more, digital set-top boxes that enable subscribers to order VOD are slowly, but sure-

senior vice president of product development.

First, there's "the amount of systems integration that has to be done with the various components, and secondly, the tremen-

with a different MPEG decoder — but you're also dealing with a different operating system, different middleware, [and a] different electronic-program guide. The set-top-box integration is usually the biggest challenge."

Still, these are the early days for British VOD, and thus it is difficult to predict where the market will go. Even getting details is difficult, with manufacturers keeping their lips sealed about any European deals beyond the U.K.

"I can't talk about things that aren't signed," protests Diva's Stephen when queried about other potential VOD launch points. However, having said that, he volunteers that "we are in discussion with a number of operators, and the Continent has a great number of opportunities." ■

Yes Television is talking to British Telecommunications about accessing its ADSL commercial rollout of VOD.



ly, making their way into customers' homes.

Still, two challenges remain for commercial VOD in Britain, according to Dan Sheeran, nCube's

dous variety of set-top boxes that we [have to] deal with," he says.

"From one set-top to the next, you almost always are dealing not only with a different hardware box —

Box,

Continued from Page 27

there are several stumbling blocks. All set-top box makers talk of turning their products into a home gateway, allowing everything from refrigerators to power meters to communicate with the outside world. To achieve this vision, however, connectivity standards have to be established.

One contender is IEEE 1394, also known as FireWire, a high-bandwidth-networking solution suitable for moving around digital-multimedia files. Set-top vendors expect that technology to appear in products soon. There's also a wireless standard, known as Bluetooth, which has a limited range and relatively low bandwidth. This is backed by cellular phone vendors and palm-top computer makers, but because the standard is in flux, no one is sure if or when it will be offered in set-top boxes. There are also efforts to use the power lines inside a home as a network, which may become the favored way to incorporate traditional home appliances. Again, the timetable for inclusion into set-top boxes is unclear and subject to debate.

In addition to clearing these networking-standard hurdles, there's also the problem of digital-content copy protection. Like the villain in a bad horror movie, the subject refuses to die. It is of critical importance to content providers, however, because without protection, users are free to make perfect digital copies of movies and special events. Resolutions of the various issues could come within the next several months. After that occurs, one of the final stumbling blocks to transforming the set-top box into a home gateway will be removed. That means another revenue stream may open up for operators, and more capabilities will be added to the set-top box.

The jury is still out on what this means to operators. MSOs the world over are working on ways to make in-home networks a value-added service that will generate more revenue. However, it won't come easily. Such set-top boxes will resemble PCs in one other way: cost. Like all consumer electronics, set-top boxes will benefit from cost-cutting innovations, but they'll also be counted upon to do more than deliver video.

Prices are "obviously going to drop a lot in the next year. But then, of course, with the new generation of boxes, I guess they're going to be up again in price," says Telewest's Welsh. ■

Around The World

■ EUROPE

Madritel Comunicaciones S.A., Madrid, Spain's fiber optic cable operator, is utilizing CosmoCall's Universe product with Siemens A.G.'s Activy set-top box to enable Madritel's cable subscribers to access live customer service directly from their TV sets.

This is the first time that cable-television subscribers in Spain will be able to communicate in real time with customer-service representatives over their televisions, the companies said.

The interactive, television-accessible customer-service system, developed by Siemens Business Services and CosmoCom, is scheduled to hit the market in the first half of the year.

@home Benelux B.V. and Belgian cable operator Telenet agreed to deliver high-speed cable Internet services in the Flanders region beginning of this year.

@home Benelux will have exclusive access to the 2.5 million homes Telenet passes to provide high-speed Internet services.

The service, named Telenet@home, will be offered to residents of Flanders and offered in place of Telenet's own "Pandora" data-over-cable service. Both companies will use an extensive program to transition current Pandora subscribers to the new service.

Chello broadband n.v. will work with Global TeleSystems (GTS) to increase chello's broadband capacity initially to 2.5 gigabits per second and increasing up to 10 gigabits per second by late 2000.

The new multiplexing network will deliver a 40-fold increase in bandwidth per fiber pair by splitting the light carried by fiber-optic cables into 40 separate channels. The outputs will then connect directly into AORTA, chello's own broadband Internet-protocol-network backbone.

The bandwidth increase is made possible by recent breakthroughs in Internet-protocol and dense wavelength division multiplexing (DWDM) technology. Both companies are also conducting joint research and development to maximize video and audio multicasting and broadcast-compliant transmissions over optical Internet-protocol networks.

QS Communications A.G., a German telecommunications start-up, will work with Lucent Technologies Inc. to provide a carrier-class digital-subscriber-line (DSL) service for local-loop access in 40 major German cities. The value of the contract is approximately \$US100 million over the next 12 months, and a potential \$US400 million over the next four years.

Lucent will design and build a Germany-wide symmetric-DSL (SDSL) network that includes Quality-of-Service capabilities.

The rollout of the network, to be named Speedway, has already begun in Cologne, Munich and Berlin. In early 2000, Hamburg, Essen and Aachen are expected to follow.

■ NORTH AMERICA

General Instrument Corp. and Canadian Cable Systems Alliance Inc. will jointly offer national-access control and digital-network system products and services to CCSA members in an effort to help the small- and medium-sized broadband operators offer digital services.

In addition, General Instrument and CCSA have recently entered into an agreement with Westman Communications Group, which has begun deploying national-access control to more than 15,000 subscribers in Brandon, Manitoba.

Members of the CCSA will now be able to launch digital services quickly and economically. Operators may select either a four-, six- or nine-transponder base headend configuration. CCSA represents small and medium-sized broadcasting distributors and provides group purchasing benefits in the areas of programming, equipment and services.

■ LATIN AMERICA

Empresa de Infovias of Brazil will purchase 11 cable TV headends, full-headend-management and a backbone system to interconnect the headend sites from Barco N.V. The contract, worth more than \$US5 million, calls for the headend to be installed in Minas Gerais state by Furukawa, the largest telecom system integrator in Brazil.

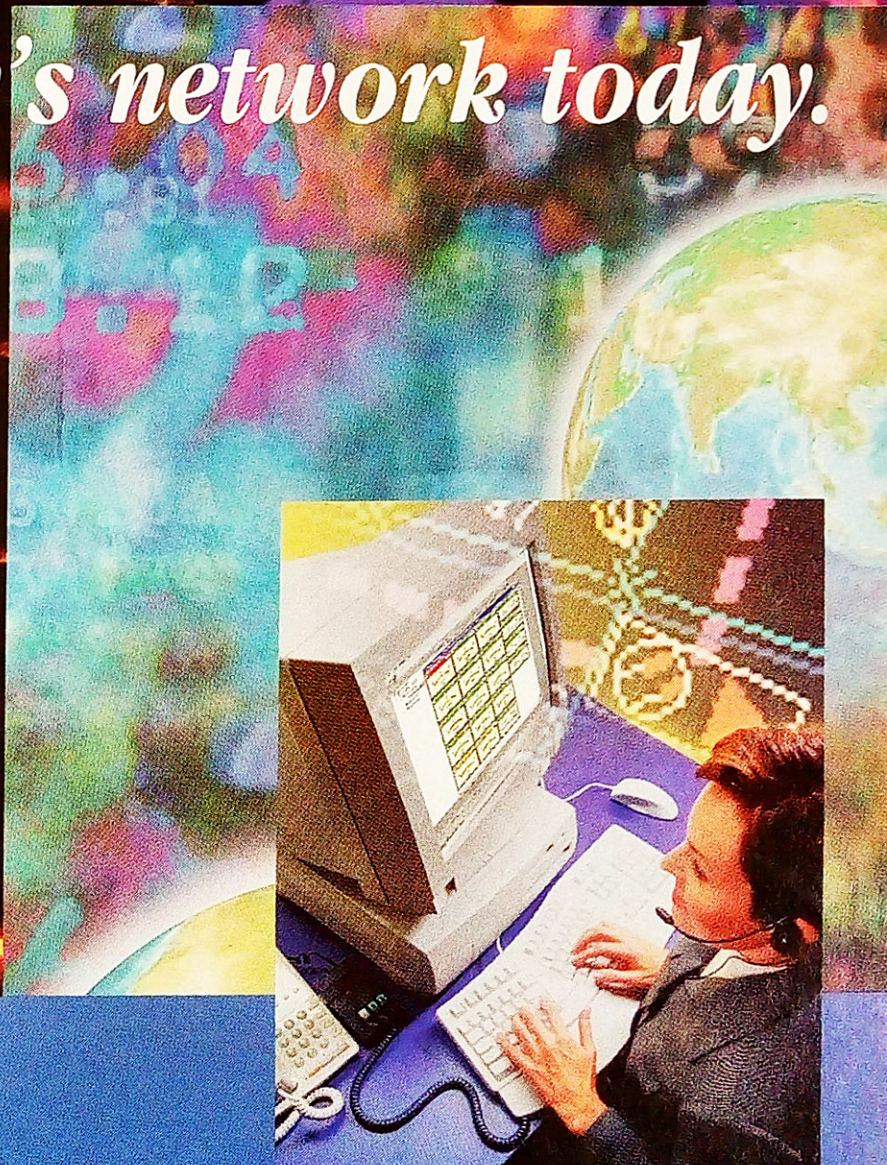
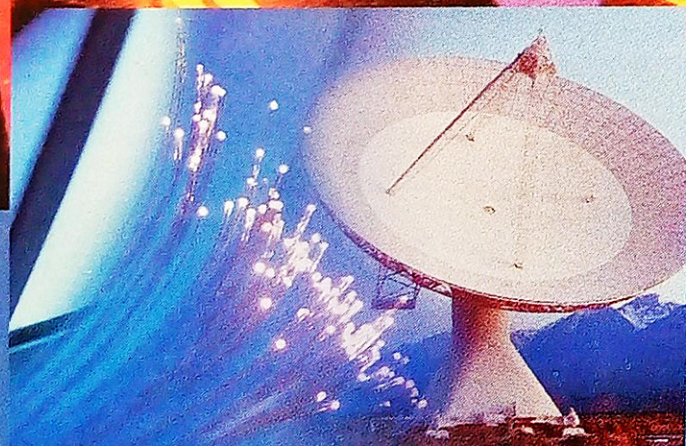
The project will provide the main cities of the state of with cable TV. The newly built Infovias cable-TV network will be used by Brazil Telecom, which has the licenses to offer cable TV throughout Minas Gerais.

Com21 Inc. said it received an order from Mexican cable operator MegaCable for its DOCSIS-compliant DOXport 1010 cable modems. Megacable, which passes 885,000 homes, will begin deploying the modems this month across its broadband network. It has 23 systems serving major cities such as Guadalajara, Veracruz and Hermosillo.

Citing a study by The Boston Consulting Group and Visa International, Com21 said Mexico ranks as Latin America's second biggest Internet market with about 1.5 million users.

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New Products

Fiber optic test equipment

Aurora Instruments Inc. has released a new line of handheld fiber optic test equipment, which includes power meters, light sources (both laser and LED), a talkset, a loss-test set, a visual fault-finder and a clip-test accessory. The equipment is targeted toward those who install and maintain fiber optic networks, cable television and telecom outside plant, LANs and other fiber installations.

The new product line is being released in North America in cooperation with Silicomp SpA of Milan, Italy.

Aurora Instruments Inc.

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Pedestal series

Marconi Communications has announced the availability of its CCP Series Combined Connection Pedestal, which is designed to house coaxial and twisted-pair-copper distribution equipment.

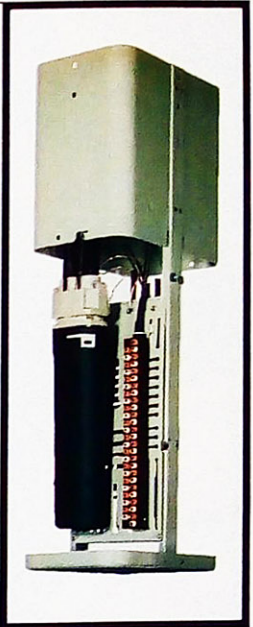
The pedestal is an above-ground, metallic enclosure featuring two separate compartments to allow for neat and efficient use of hybrid coax/copper distribution. Each chamber contains a universal mounting plate with mounting provisions for any fixed-count terminal block, as well as coaxial equipment such as taps and splitters.

The pedestal is suited for providers of voice and video services, as well as for joint coax/copper trenching applications.

It allows service providers to minimize the clutter of communications electronics in customers' backyards and neighborhoods.

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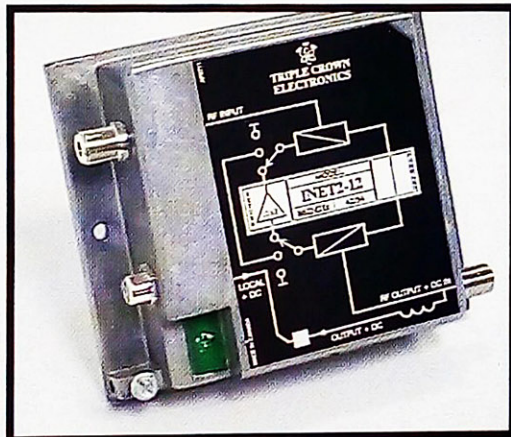


Home-drop amps

Triple Crown Electronics has introduced its INET series of home-drop amplifiers, which offer solutions for problems encountered in residential applications. Because every home installation is different, the amplifiers are offered in several unique configurations, ranging from single port to quad port. All feature active forward gain and variable return-path options.

Triple Crown Electronics Inc.

4560 Eastgate Parkway
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Canada
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Fax: (1) 905-629-1115
Web site: www.triplecrown.com



TDRs

Riser-Bond Instruments has introduced its new Model 1550 TDR, which puts accurate cable-fault location in the palm of the user's hand. The TDR locates faults in short- or long-range applications on all types of metallic cable. The unit features an ergonomic design and a weatherproof housing.

Automatic attenuation compensation ensures that all faults, whether near or far, are easy to locate on a full cable. Model 1550 will locate faults from three feet, to more than 9,000 feet with 1 percent accuracy. The tool is suited for technicians, linemen and construction personnel. It features a backlit liquid-crystal display that makes it easy to read in low light, and its rugged design makes it reliable in all types of weather, according to the company.

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Mini OTDR

Anritsu Co. has introduced its MW9076 family of mini OTDRs that provide measuring speed, wide-dynamic range, short dead-zone and automatic execution of functions for simple operation. Included in the family is a mini OTDR that performs measurements of chromatic dispersion from one end of the optical fiber, a critical measurement in dense-wavelength-division multiplexing and OC-192 applications.

All four models in the family display measurement results within 10 seconds after the "start" button is pressed. The new models offer a choice of two color displays and a sampling speed of 0.15 seconds. As a result, the family is suited for all multi-fiber testing applications, as well as real-time monitoring of fusion or mechanical splices.

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Node platform, element-management system

Philips has introduced its Transport Integration in Advanced Routing and Return Applications (TIARRA), a new multi-functional, universal network platform designed with integrated element-management system (EMS) compatibility. The platform improves performance and flexibility through its modularity across many network variations, and is an integral component of the Philips' SpectraHub DWDM architecture, according to company officials. An EMS platform monitors, manages and controls network elements using open standards.

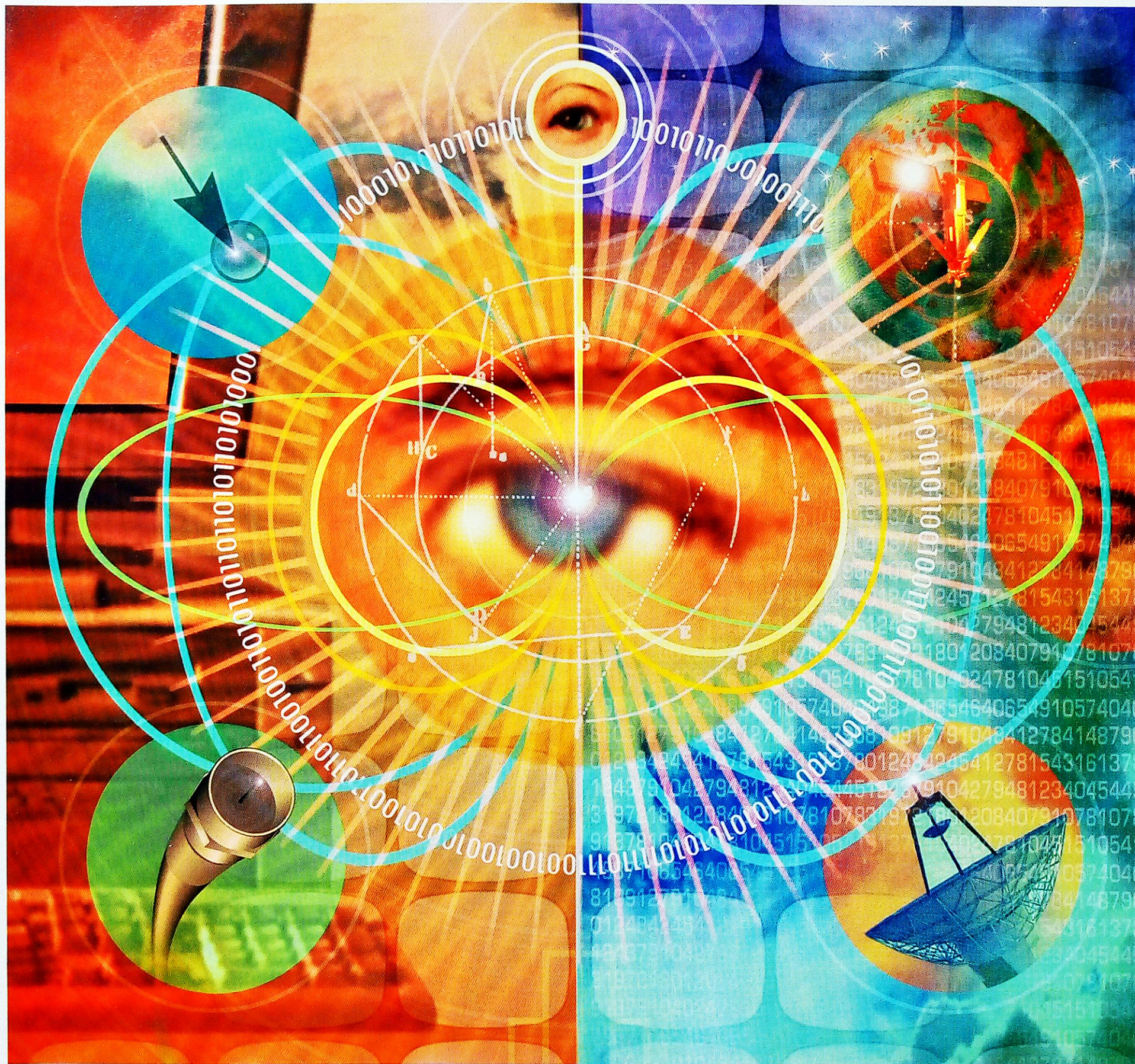
The TIARRA RF platform is configurable with various amplification technologies, including gallium arsenide, which improves performance with increased output levels. A patented analog to digital converter and an ITU channel/DFB laser module process the return RF bandwidth into a binary data bit stream on a specified optical ITU channel.

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BLIPS ON THE SCREEN

Soccer,

Continued from Page 6

diehard fans, they downplay the impact its arrival will have on their own market shares. "They will have to pay a lot of money for a very limited number of marquee rights, in addition to filling 24 hours of programming. That's not easy for any network, let alone one that is starting from scratch and has no brand-name recognition," says Fox Sports Américas vice-president Claudio Nozzi.

Willy Burkhardt, senior vice president and managing director of ESPN International, shares Nozzi's skepticism. Says the former Stanford University soccer captain: "There's so much ground to be covered, and it is so costly, that it's nearly impossible for a single,

dominant player to emerge."

Cable executives are quick to point out that local-tournament play, the cream of televised soccer coverage, is something that PSN still lacks. In Brazil, the region's largest soccer market, those rights are hoarded by media conglomerate Organizações Globo. HMT&F's 49 percent-owned Traffic controls some rights, but has leased them to a number of networks.

Argentina's TyC has parceled out its exclusive rights to a variety of broadcast and cable channels, including ESPN, Fox Sports and its partially owned TyC Sports.

But even without some of those rights, HMT&F could still achieve its goal of creating a strong enough platform to attract an eventual buyer down the road, says Baez. "A lot of possibilities exist, including a merger with another panregional

sports programmer or a sale to a big European or U.S. media company looking to gain a foothold in the region," he explains.

But before that moment arrives, PSN must go through the thankless task of negotiating a fair carriage price with the region's multiple system operators (MSOs), many of which complain of rising programming costs. In Argentina, however, HMT&F has a big stake in MSO CableVisión. PSN president Jacques Kremer, the former head of ESPN Latin America, says the network's marketing strategy will, "combine a mixture of pay-per-view, premium-package and basic-package offerings." As ambitious an endeavor as PSN claims to be, it is only one component of HMT&F's much broader sports offensive in Latin America, says Baez. Taking its cue from the likes

of its own CEO, Thomas Hicks — owner of the Texas Rangers baseball franchise — as much as fledgling sports mogul Rupert Murdoch, the U.S. investors have begun to acquire teams. In Brazil, they have full control of Corinthians, the popular São Paulo soccer club, as well as Cruzeiro, last season's most-winning team.

HMT&F is also speculated to be interested in acquiring a team in the United States, where soccer has been gaining popularity in recent years, especially among Hispanics.

And along with ownership come the spoils afforded by merchandising, the Internet, and television-exhibition rights, as well as management of the properties where the teams play. Indeed, Baez says, HMT&F plans to build new state-of-the-art stadiums for their squads in an effort to boost

ticket sales and revenue from concessions by creating a more family-oriented environment. In Argentina, companies and individuals are prohibited from owning teams, which are still managed as private clubs made up of dues-paying members. However, a number of insiders say that Argentina's soccer league by-laws could be amended in the future to allow financially struggling teams to open up their capital structures.

Even without a team in its Argentine stronghold, HMT&F's grandiose undertaking may just transform the way Latin Americans view soccer — whether from the grandstand or the family room. In a continent that is home to half of all World Cup championships, the potential payback from such a feat could be lucrative. ■

India,

Continued from Page 6

compete with us," says the mild-mannered, yet confident Chandra. "That's O.K. Having deep pockets does not mean that everything [News Corp. chairman Rupert] Murdoch touches will become profitable."

If Indians know Murdoch for his wealth, then Chandra is just as recognized for his political ties that reach across party lines. That, combined with his business acumen, have made him a foe with which to be reckoned.

But Star isn't backing down. It first indicated it will continue to be a piece of India's TV menagerie when its chairman and CEO, Gareth Chang, flew here in November to meet with Information & Broadcasting Minister Arun Jaitley.

Chang later told journalists that Star was redrawing the blueprint for its bouquet of channels, and firm plans would be in place within three months, that is, February.

Star CEO for India Peter Mukherjee asserts the programmer "has been expanding steadily, though we opted deliberately for a low-key presence. Our new Star World channel, with its premium international English-language programming, has helped win back English-language viewers."

Star also has decided to eliminate all English-language content from its Star Plus channel, making it an all-Hindi-lingo network. "We also plan to launch a Star Hindi movie channel by mid-June," notes Star senior vice president of corporate affairs and international business development Arrow Sinha Roy.



Star aims to go it alone in India with shows like *Kara Kagaz*

Amid the expansion, News Television India Ltd., the parent of Star's local operations, is planning to sell shares in an initial public offering this year to raise funds for the expansion. Also on deck: the launch of Fox Kids sometime early on, following rival Nickelodeon's debut last year through a partnership with Zee.

While Zee has maintained its lead, it also had its share of difficulties. For starters, the company is just now addressing digital uplinking, a full two years after Star made the switch. Zee is also hammering out details concerning whether its channels may originate from Noida, a town just outside New Delhi. On that front, it may be hamstrung by legislation that prohibits channels that are 20 percent or more owned by foreign companies or individuals from uplinking from within India. Chandra holds a British passport and owns more than 70 percent of Zee, thereby disqualifying the company.

Zee's plans to digitize its channels hang the ability to solve the foreign-company issue by arguing that it shouldn't apply to non-resident Indians. The company appears confident that it will receive the green light, and is moving ahead with plans for a "direct-to-operator" satellite service as a precursor to a bona fide direct-to-home platform.

"Uplinking from within India will provide us with several advantages. Our advertising revenue will make a quantum leap," says Zee vice president of corporate communications Ranjan Bakshi. "We can carry local advertising and that will open up a new market for us."

As plans for the direct-to-operator project advance, Bakshi adds that Zee is working with France's Canal Plus S.A. to develop a subscriber-management system that will help combat the tremendous amount of underreporting by cable operators. That, he says, should help boost Zee's subscription revenue by 50 percent, brining it more in line with that of programmers in other markets.

Both Star and Zee are watching to see how the government decides to let DTH into the country. Publicly, at least, Star has adopted a conciliatory stand on the subject. Says Mukherjee: "We are still awaiting the government decision on DTH. However, I believe it is economically unviable for there to be any more than one DTH platform in India."

Even as the two giants lock tusks, Indians don't seem to mind. The grass might not look too pretty in the end, but there'll be a lot more to watch on TV. ■

Israel,

Continued from Page 6

But the MSOs' most aggressive strategy involves a merger that will unite the country's three dominant systems players.

In November, Tevel announced its intention to merge with Golden Channels. Tevel is owned by United Pan-Europe Communications N.V. — an arm of Denver-based UnitedGlobalcom Inc. — and Israeli firm Discount Investment Corp. Golden Channels, in turn, is owned by three investors: the Aurec Group, Yediot Achronot, and local entrepreneur Eliezer Fishman. Late last month, Matav finally announced its intention to join the others. In an elaborate deal, the Dankner Group, which has a controlling stake in Matav, will "buy" Tevel's subscribers, place them in a new holding, and give each cable operator an equal share of the new company.

Matav vaguely says the deal, expected to close by August, will help "meet the competition." That competition includes not only YES, but the mighty Bezeq Israel Telecom, if the merged operator enters the fixed-telephony and fast-Internet business.

The impending license review has provoked an unwelcome national debate on the performance of the cablers, to their intense discomfort.

Ha'aretz, the only Israeli newspaper without a stake in cable, recently thundered, "The state ... must not surrender to moneyed interest of the cable companies. 'The state must make the terms of the franchise more strict.'"

Current Minister of Communi-

cations Binyamin Ben Eliezer comments, "ten fat years of the cable companies are coming to an end."

Jacoby describes the cable industry's relationship with the new minister as "love-hate," an improvement upon the relationship with Livnat. It probably tipped a little more in the hate direction when Ben Eliezer recently threatened to force the cable operators to make their exclusive channels available to YES, which is suffering from a dearth of content.

But no one expects Ben Eliezer to revoke anyone's license, despite lobbying by YES and others to persuade him to do just that. "There's no way the government will organize a new tender, but the licenses they issue this time may not be exclusive," predicts Kogan.

But operators are eyeing not only cable licenses. They're also dearly coveting the high-speed Internet-service provider licenses that the government is expected to award. And it's widely believed that the best way for the systems to catch that golden carrot is to appease the government by cabling all homes that want the service.

Tevel has promised to connect everyone in its franchise by October. Matav hopes to reach 99 percent of its franchise homes by the end of this year.

The operators also hope that the domestic fixed-line telecommunications market will be their salvation.

"We're looking forward to the opening of the market. Cable TV will always be our bread, but the butter will come from other services," says Jacoby.

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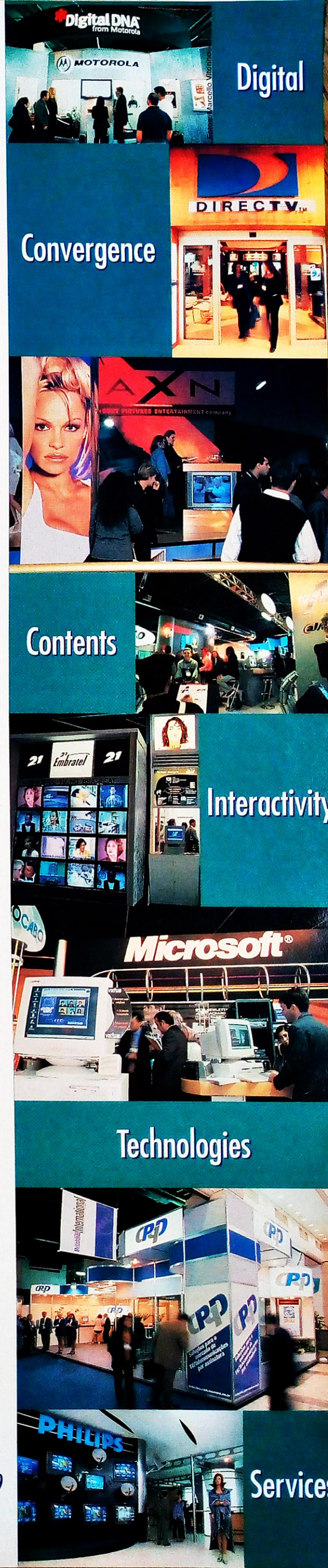
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Chile,

Continued from Page 21

pend on the quality of their network, and the speed at which they roll out value-added services like Internet [access]," he says. "Having a global giant like UGC on your side provides a big boost."

With UGC's help, VTR is now adding Internet to the mix to close the circle on its corporate parent's much-touted "triple-play" strategy of offering video, voice and data

A VTR employee at work



GONZALO SANTOS/Straight Marketing International

services over the same wire. This month it formed VTR.NET S.A., a company to commercialize broadband-Internet access, and preparations are already underway for a July launch of chello Broadband, the high-speed Internet-access subsidiary of UGC's United Pan-European Communications N.V.

Word of the rollout comes from chello vice president of industry relations Mike Smith. The broadband portal and Internet-service provider (ISP) attracted more than 100,000 subscribers within its first year of operation in Europe. With an impending introduction in Australia, Chile will become only the second market outside of Europe where chello is offered.

Though Internet usage in Chile is still tiny by U.S. and European standards, it is growing at the fastest rate in Latin America, with commercial accounts expected to grow from a current 223,000 to 790,000 by 2004, according to Cambridge, Mass.-based Pyramid Research. The firm estimates that 6 percent of those users could access the Internet via cable modems.

Furthermore, it is a service al-

ready in high demand in Santiago, where Metropolis is still the top cable operator.

Though VTR's convergence strategy has its critics, most industry experts agree that its vanguard approach is serious enough to threaten Metropolis.

"Metropolis today is pursuing an unfeasible strategy of trying to maintain a fiber optic network by offering only pay TV," says Miguel Smirnoff, a Buenos Aires-based journalist who publishes a newsletter covering the region's media industry. Though a sale may not be immediate, Smirnoff and others agree that Metropolis' shareholder base will eventually be broken up.

But given VTR's head start and the tiny size of Chile's slow-growing market, finding a buyer may not be easy. According to Smirnoff, both Liberty and Claro have little interest in boosting their participation in Metropolis. "Liberty is more focused on programming in Latin America and in no market has full control of an MSO. And Claro lacks the background in cable and the access to foreign capital markets to manage the company for any extended period of time," he says. Armstrong's earlier comments certainly indicate a change may lie ahead, while Claro couldn't be reached for comment.

Attention, therefore, has shifted to CTC, considered by most insiders the natural candidate to wrest control of Metropolis and its 40 percent share of the national cable market.

CTC already owns 100 percent of the network that Metropolis uses to deliver its signals. It's also the country's largest fixed-line telephone operator and was the No. 1 dial-up ISP. Furthermore, an outright acquisition would fit in well with the strategy of its parent company, Spain's Telefónica International S.A. (TISA). Since creating a separate unit last year to develop its diverse media holdings in the region, TISA's name has popped up in more than a few markets as the heir apparent to assets that it now jointly manages.

However, CTC vice president for strategic planning and Metropolis board member Raimundo Beca discourages reading too much into this hypothesis. "We are extremely worried about our margins this year, and if Metropolis continues operating like it is now, it wouldn't be profitable for us to increase our stake," he says. The company, which aims to keep its cable and telephony businesses separate from one another, doesn't plan to provide broadband

phone service, since it already has a huge copper network.

It's phone business is also under pressure. A government-mandated 12 percent reduction in local telephone rates, a possible 97 percent reduction in long-distance rates, plus a weak economy have hurt the telco giant's revenues, which fell by 20 percent per line last year. To make matters worse, CTC now faces a \$US1 billion lawsuit from minority shareholders who allege that they were

based on Metropolis' leadership in Santiago, where Chile's pay TV customers are concentrated, as well on what he claims is an equally advanced fiber backbone that can be upgraded for only a marginal investment. However, other industry sources question the condition of Metropolis' network, alleging that transmissions have suffered as a result of neglect. Whatever the case, VTR's high-speed Internet service is only now in its getting started stages and will

A Metropolis headend



shortchanged in the recent sale of its residential Internet unit to Terra Networks S.A., another unit of Telefónica S.A.

To offset these blows, Santander's Barnes says CTC is likely to reduce by as much as \$US200 million this year the amount it spends on capital improvements and acquisitions.

Beca points out that CTC could also attack the broadband market by deploying digital-subscriber-line (DSL) technology over its more densely penetrated copper-wire network. However, Barnes says that that would conflict with the regional strategy of Terra Networks. And since DSL is more widely used in homes and small businesses, its value to CTC's corporate Internet business is likely to be limited, Barnes says.

Regardless of how Metropolis' ownership row is resolved, its executives downplay the toll the dispute is having on the company's performance. Despite the bad blood and a virtual freeze on investments pending the court's decision in the Claro-Liberty case, Metropolis general manager Arturo Ricke is confident that the company's outlook is positive. "Surely, in the long term, we will need to offer [broadband] Internet, but in the short term, our current strategy is perfectly sustainable," he maintains.

Ricke's faith in the future is

face tough competition from more established players, including the business Terra bought from CTC. That could benefit Metropolis.

"Bundling telcom with media services is a sexy marketing tool from a customer's perspective, but I'd like to see if VTR's bottom line makes it a worthwhile venture," Ricke reflects. "One thing is for certain, it's very difficult to compete effectively in three markets at once."

A number of analysts agree, citing the massive influx into the region of well-armed global telecommunications players as a reason for concern. "There's a lot of companies pumping big money into Latin America right now, especially Chile, because it's such an attractive market from a regulatory and demographic perspective," says Santander Investment Latin American media analyst David Taff. "But we're ultimately talking about a very small market and some of the companies are naturally going fall to the wayside. How cable companies will fare is still an unanswered question."

One competitor that thinks it has the key to success is Sky. The company, along with News Corp.'s Fox Sports Américas, paid \$US57.5 million for rights to some of Chile's top soccer matches until 2002. These rights had previously been the exclusive domain of the cable companies. "Pay TV

has a lot of potential broadband applications, but all depends on winning the public's loyalty as a provider of quality entertainment," says Andrés Rudolphy, Sky's general manager for Chile.

Rudolphy says up to 25 percent of Sky's Chilean subscribers are disgruntled former cable customers. "Our focus on programming — especially soccer coverage and movies unseen on cable — has allowed us to penetrate middle segments that we didn't expect to reach at such an early stage," he says.

In Chile, DirecTV's local operating partner is VTR. Helping the two platforms make inroads in Chile are the country's antiquated programming rules, long an irritant to the cable industry. Despite boasting the region's most liberal economy, Chile has some of the toughest laws governing TV content, from which DTH providers are exempt.

From 6 a.m. to 10 p.m., the transmission of foreign programs and movies on cable is strictly monitored, sometimes resulting in the scrambling of international satellite feeds at a moment's notice. Indeed, censorship is so prevalent, according to one programmer, that shows seen on broadcast TV in Argentina can be blocked when they are exported to Chilean MSOs.

Luckily, for the industry, long-standing pressure to change this system seems to be bearing fruit. This month, VTR began marketing Playboy TV — following a rollout of addressable set-top boxes — as part of its premium lineup, thus becoming the first Chilean MSO to introduce adult programming. Meanwhile, with both presidential candidates promising to review the censorship laws, most cable executives believe the unpopular restrictions could be nearing an end.

Ironically, easing the existing restrictions could be more damaging to Metropolis, says Smirnoff. The MSO adheres to a strict editorial line imposed by managing shareholder Claro, a devout Catholic with outspoken views against obscenity on TV. Despite Ricke's insistence that market studies show the value of racier programming to Chileans to be overstated, Claro's partners privately say that his high moral standards are a barrier to growth.

To what extent the divergent strategies among Chile's cable and DTH players become a decisive force remains to be seen. But unlike Lagos' political campaign slogan, "equality" seems sorely out of place at a time of such fierce competition. ■

Taking Stock

BY MIKE GALETTO

CURRENCIES

The Euro's Limbo

DURING THE LATE '90S, skidding emerging-market currencies grabbed (all too many) headlines, as they dragged companies with dollar-denominated expenses down with them.

Last year, though, a lot of the monetary malaise was focused on Europe, where the shiny new euro became tarnished as it lost 13.2 percent of its value against the dollar. This time around, there were no stories of pay TV operators tightening their belts or begging suppliers for understanding or restructured payment plans.

Credit the stability to the fact that "Euro-zone" operators have both costs and revenues in the same currency — either the euro or their euro-linked local coin.

"We have less than, or only a few million dollars, [of expenses] in dollars," says Michael Vorstman, treasurer of upstart Spanish multiple system operator ONO. "Ninety-five percent are in euros or pesetas."

That means even while the euro fluctuates, expenses and income move in tandem. Contrast that to Brazil last year, where operators had to pay dollar-dealing vendors twice as much in their local currency, the real, as it lost

half its value against the greenback.

At the same time, the euro's growth is leading the region's capital-hungry operators to issue more debt in the currency. ONO has \$US275 million in outstanding dollar-denominated bonds and \$US125 million worth of euro-denominated bonds. Says Vorstman: "We want as much in euros as we can get. It takes away the currency exposure."

NTL Inc. CEO Barclay Knapp says the operator also aims to switch a lot of its dollar-denominated debt into euros.

That's not to say that there's zero risk. Dan Forey, CEO of Forey Capital International Inc., a cable-industry investor, sees the liabilities as one reason for the pullback of major U.S.-based operators from abroad.

"That becomes a big consideration for companies when they're building with U.S. dollars versus an NTL or [United Pan-Europe Communications N.V.] working in a local-base currency," he says.

At presstime on Jan. 14, the euro was trading at 1.0144 against the dollar, giving it a year-to-date gain of 7.5 percent.

EURO
VS
DOLLAR
1999

-13.2%

Routing Returns

THE BROADBAND INDUSTRY is increasingly pitching itself as the Internet backbone, and talk like that is bound to bring up Cisco Systems Inc., the blue-chip routing titan.

There's another routing company that, while not as high profile, has its own high-flying stock thanks in part to high-speed-access rollouts.

Redback Networks Inc. has seen its shares more than triple since its initial public offering last spring. The company, based in Sunnyvale, Calif., pitches its products as subscriber-management systems that enable high-speed access providers to "sell based upon the service selected," says Redback director of cable operations Chris Johnson.

In effect, subscribers can establish virtual-private connections to specific Web content or to another network, such as a corporate intranet. At the same time, service providers can

sell access on a sort of a la carte basis and could develop premium content, similar to the way a programming lineup is tiered. The system also enables access platforms to better allocate bandwidth,

TECHNOLOGY

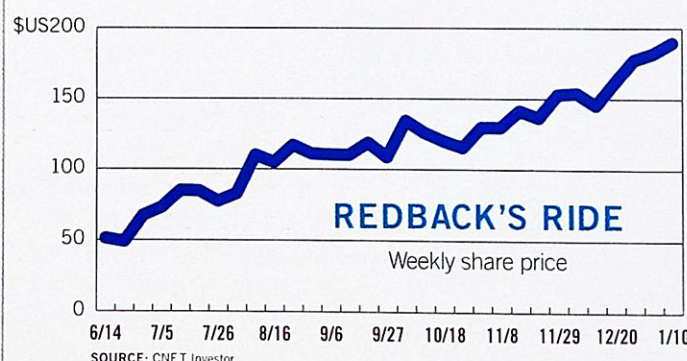
which could become an issue as digital-subscriber line (DSL) and cable-modem subscriber levels rise.

After a series of agreements with DSL providers, Redback in December announced its first cable deal with Dutch operator Casema. In a statement unveiling the agreement, Casema CEO Henke de Goede said Redback's subscriber-management system provides the operator with "scalability [and] simplified configuration, and [an] operational model" to deliver "new revenue-generating services."

In a recent report, U.S. Bancorp Piper Jaffray Inc. analyst Conrad Leifur called Redback a "pure play on broadband access," noting the company's products "serve as the

gateway between the broadband-access network and the Internet backbone."

Still, he noted that with competition from the likes of Cisco, Nortel Networks Corp., Lucent Technologies Inc. and France-based Alcatel, "there is no margin for error in terms of product development and sales and marketing execution."



THE PAY TV PAYOUT

Company	Ticker	Exchange	Close 12/15/99	Close 12/29/99	Percent Change	52-Week High	52-Week Low	Company	Ticker	Exchange	Close 12/15/99	Close 12/29/99	Percent Change	52-Week High	52-Week Low
AsiaSat	SAT	NYSE	\$29.69	\$29.50	-0.63	\$30.75	\$13.75	Globo Cabo	GLCBY	Nasdaq	\$9.38	\$18.25	94.67	\$19.00	\$1.00
AT&T	T	NYSE	\$54.50	\$50.63	-7.11	\$64.12	\$41.50	MIH	MIHL	Nasdaq	\$60.00	\$55.00	-8.33	NA	NA
British Telecom	BTY	NYSE	\$218.38	\$237.81	8.90	\$243.06	\$143.00	News Corp.	NWS	NYSE	\$40.00	\$38.56	-3.59	\$41.00	\$24.68
BSkyB	BSY	NYSE	\$87.06	\$92.63	6.39	\$95.81	\$40.62	NTL	NTLI	Nasdaq	\$105.94	\$121.06	14.28	\$127.87	\$52.56
Broadcom	BRCM	Nasdaq	\$214.25	\$275.00	28.35	\$282.37	\$46.25	PanAmSat	SPOT	Nasdaq	\$46.56	\$62.75	34.77	\$62.84	\$26.37
Cablevision Syst.	CVC	NYSE	\$73.94	\$74.56	0.85	\$91.87	\$48.12	Rogers Comm.	RG	NYSE	\$22.69	\$24.06	6.06	\$26.50	\$8.31
Cable & Wireless	CWZ	NYSE	\$63.00	\$69.38	10.12	\$70.50	\$44.50	Scientific-Atlanta	SFA	NYSE	\$58.25	\$53.75	-7.73	\$66.50	\$21.81
C&W HKT	0008	Hong Kong	\$2.46	\$2.89	17.32	NA	NA	Shaw Comm.	SJR	NYSE	\$31.31	\$33.75	7.78	\$46.50	\$23.56
Canal Plus	CNLP	Paris	\$112.56	\$140.96	25.23	NA	NA	Telefónica	TEF	NYSE	\$70.56	\$75.88	7.53	\$76.87	\$41.18
Deutsche Telekom	DT	NYSE	\$57.94	\$68.19	17.69	\$70.25	\$32.00	Televisa	TV	NYSE	\$60.25	\$66.75	10.79	\$72.25	\$18.25
Excite@Home	ATHM	Nasdaq	\$50.19	\$43.81	-12.70	\$99.00	\$33.12	Telewest	TWSTY	Nasdaq	\$49.38	\$55.25	11.90	\$60.00	\$27.25
Flextech	FLXT	London	\$19.34	\$18.44	-4.65	NA	NA	UnitedGlobalCom	UCOMA	Nasdaq	\$56.13	\$64.50	14.92	\$70.87	\$9.06
General Instrument	GIC	NYSE	\$73.56	\$83.38	13.34	\$84.06	\$28.12	UPC	UPCOY	Nasdaq	\$106.25	\$123.63	16.35	\$140.50	\$31.12

Source: CNET Investor

ONE ON ONE

Dawn's Early Light

JANET STILSON SPEAKS WITH DAWN MCCALL

If there were ever a program group to which the word "static" should never be applied, it's Discovery Communications Inc. Shufflings in its upper-management ranks seems about as common an occurrence as Valentine's Day. And its overseas unit, Discovery Networks International (DNI), has certainly inherited that same characteristic, with three different leaders in as many years.

But if there were ever a program executive for whom the term "stabilizing factor" could be applied, it's Dawn McCall, who took over the DNI president's torch from Don Wear in late July. McCall had earned the reputation of a quiet, effective authority, as she incubated the network group's Latin America/Iberia division from ground zero in 1994, to four channels that cumulatively reached 35 million subscribers at the time she left for the top-cat seat.

To get an idea of the circus balls she's juggling, consider this: Discovery now has more than 32 separate feeds in 24 languages, transmitted via 15 satellites. It has eight channel brands that are distributed beyond United States shores. And every year, each channel requires 550 hours of new programming, some 30 percent of which, on average, are coproductions, while another 30 percent are commissioned. The international and U.S. units each have about 600 staff members.

McCall comes into her new role as Discovery faces increasing competition from globally minded programmers, as well as from local documentary channels. To manage the many tasks at hand, McCall has elevated a few managers within her circle of advisors in Latin America to key posts. The launch of an international Web site for the Discovery Channel early this year is one of the first new ventures on the plate. In the following edited interview, McCall gives some clues about what they intend to discover, and accomplish, in the months ahead.

STILSON: The last time we did an article at any length about Discovery, we quoted Don Wear as saying that Discovery's international operations would reach profitability as a whole sometime between '99 and 2000. Can you update us on that?

McCALL: We're still on schedule to become profitable. That is the time frame that we're looking at. The businesses are doing very well. We're very, very happy with the progress.

STILSON: The European operations are already profitable, right?

McCALL: Yes.

STILSON: What about Latin America?

McCALL: In Latin America, Discovery Channel is profitable. We look at our businesses individually. So Discovery Channel Latin

America and Discovery Channel Europe are both profitable. Most of the [sub-niched] channels were launched within the last three years or so, and typically to turn a business [profitable] you're looking at between five and seven years.

STILSON: It looks to me like the sub-niche channels Discovery has created have been pretty much fully exploited in Europe. There are a few more that could launch in Latin America and there's a lot of room to grow in Asia. Is that true?

McCALL: I would say yes and no. With respect to Europe, while we've launched certain channels there, we certainly don't have the distribution that we'd like across the region.

In Latin America, most of the channels there are pretty fully distributed, but, as you suggest, there

are additional opportunities. And as you also suggested, in Asia and India there's a lot of room to grow for new brands and continued distribution.

STILSON: What's on your hit list of things you'd like to accomplish?

McCALL: One of the key things I did when I stepped into this role was really get the right team in place. The world is changing so quickly that I wanted to get people in who had some sense of what was happening in the regions.

The second thing I felt we needed to do was really take stock of where we were. We had a lot of brands around the world. Which ones did we want to move forward on a global basis? Which ones did we want to move forward only regionally? What is our relationship with the BBC [which is co-ventured with Discovery on several channels]? How do we want that relationship to grow?

The marketplace is getting more and more crowded; it's much more aggressive out there. And as an organization, we need to have a really solid plan of how we want to move forward. So my first few months were really learning from the regions what their business is all about.

Now we're finalizing our plan. Our sense of it is that there are a lot of companies out there, but we're all trying to figure out how we want to move those businesses forward, and I'm not sure anybody's got it yet.

STILSON: You mean the different networks that you compete with?

McCALL: Exactly, exactly.

STILSON: I want to talk to you specifically about Germany and the recent deal that saw News Corp.'s British Sky Broadcasting take a stake in the Kirch Group's Premiere World direct-to-home platform. You have distribution in Germany through Premiere World, but I don't be-



McCALL

DAWN
McCALL

TITLE:

President, Discovery Networks
International

BACKGROUND:

Worked under U.S. President Jimmy Carter as a political appointee with the U.S. Small Business Administration. Was regional director at The Weather Channel before becoming vice president of affiliate sales and relations at the Discovery Channel in the U.S. Promoted to senior vice president and general manager of Discovery Networks Latin America/Iberia before attaining her current post in late July 1999. She is also on the board of the panregional organization TAP Latin America.

STATISTICS:

46 years old; moving from Miami to the Washington, D.C., area; single; no children.

lieve you have much beyond that. Sky has an equity stake in your competitor, National Geographic Channel, and News Corp. also has interests in some sub-genre channels like health and travel that Discovery also competes with. Do you see that new alliance as a threat to your growth potential in Germany?

McCALL: We still feel very good about Germany. We are in the process of exploring additional opportunities there with our current partner. But as you suggest, [News Corp.] does have an interest in National Geographic that can be perceived as a direct competitor to some of our product. We don't necessarily look at it in that way, simply because every company takes a different

approach to how they program services

I think you can see that here in the States between Discovery's health channel and [News Corp.'s] health channel. They, I'm sure, will have their own thinking about how they want to program. And we generally take a different tack.

STILSON: We're starting to see more and more country-specific documentary-style channels. How do you counteract that? Are you going to be doing more local programming in the future?

McCALL: As a company, we're moving much more toward coproductions, as opposed to fully commissioned programming. Certainly in Europe, we do a lot of coproductions.

In Latin America we began doing those a couple of years ago. We recently did a coproduction in Asia, specifically in Thailand. So as the businesses become more solid and profitable, you'll see more and more of that.

STILSON: You're a rarity, in that you're a woman heading a major global program-network group. Are there certain ways of conducting business that you've developed to communicate effectively with men?

McCALL: One of the keys for me has always been that I'm more interested in listening to what other people have to say as opposed to me doing a lot of talking. So I have a tendency to ask lots of questions and learn lots of things, and it gives me a better sense of how to approach a particular company or particular individual.

And I have a lot of respect for the people I deal with. That's not to say you don't want to kill someone at some point in time for things that may be happening. But I really do have a lot of respect for people in the field.

And the last thing is, it's a great industry. I really enjoy what I'm doing. It's not about ego for me, it's more about learning the business and learning my craft, and figuring out how to move it forward. ■

May 7, 2000

Sunday
124241 WEEK 18

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